



UNIVERSITAS
INDONESIA

Yogyakarta

FACULTY OF
ENGINEERING

ACADEMIC GUIDEBOOK

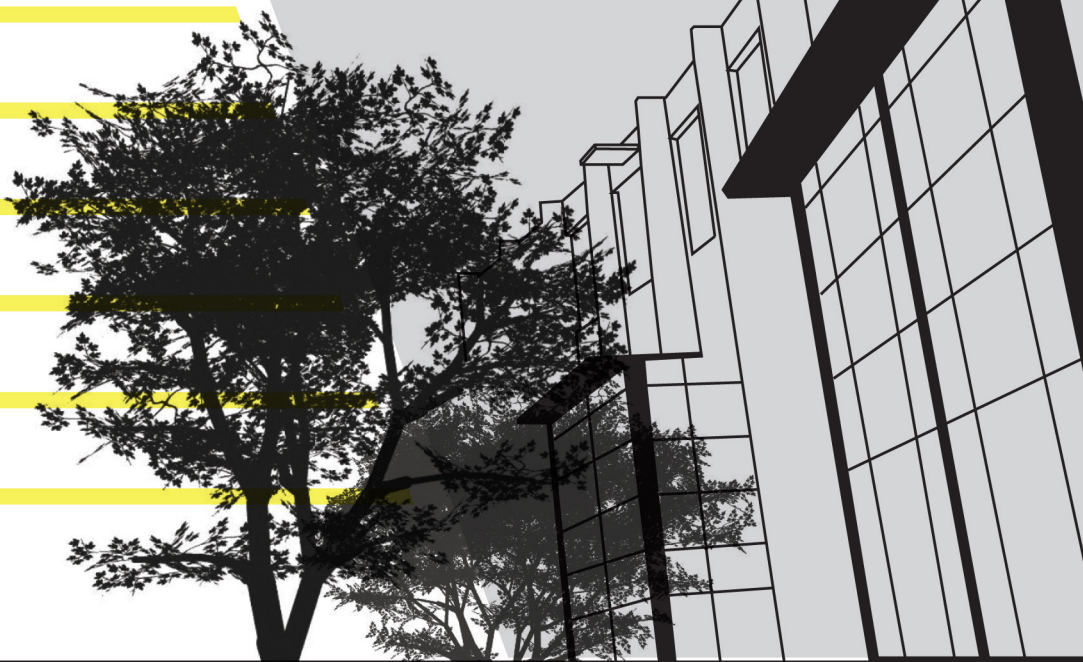
2017 edition

ARCHITECTURE DEPARTMENT





PROFILE OF FTUI AND DEPARTMENTS



1. PROFILE OF FTUI AND DEPARTMENTS

1.1. HISTORY OF FTUI

The history of the Faculty of Engineering, Universitas Indonesia (FTUI) began with an offer made from young engineers belonging to the Society of Engineers Indonesia (PII), to the first President of the Republic Indonesia, Bung Karno, for the renovations of the heavily damaged main streets of Jakarta. At that time Jakarta was preparing for the International Sports Event, the GANEFO. This bid was welcomed by President Soekarno. The young engineers were granted permission to start the renovations under the condition that all work must be completed within two weeks period. Headed by Ir. Bratanata, Ir. Roosseno, Ir. Sutami, and Ir. A.R. Soehoed, the project was completed on time.

After successful accomplishment of the street renovation project, these young engineers with their iron will felt that there was more that they could do to serve our country. But what? Then they thought of a brilliant idea: "Why not establish an engineering faculty in Jakarta as an alternative to the one in Bandung? This way those residing in the country's capital would not need to travel far to Bandung for an engineering education".

During the ceremonial event of Lenso dancing at the Pembangunan Building (formerly known as Pola Building) to welcome the GANEFO guests of honor, the young engineers brought their idea to President Soekarno to which he responded by inviting them to the Presidential Palace the next day. During the meeting in the Presidential Palace, the President wholeheartedly approved of the idea and even directly appointed Prof. Ir. Roosseno as the first Dean of the Faculty of Engineering. The President also instructed that the new Faculty of Engineering would be part of the University of Indonesia under the leadership of its Rector, dr. Syarif Thayeb.

The Establishment of Faculty of Engineering UI

Once dr. Syarif Thayeb served as the Minister of Higher Education and Science, he issued Decree No. 76 dated July 17, 1964 regarding the establishment of the Faculty of Engineering. Faculty of Engineering was officially established in Jakarta without any official ceremony or celebration, under the banner of the University of Indonesia as youngest faculty. And so the history of the Faculty of Engineering Universitas Indonesia began with the first three Study Programs with their respective Head of Study Programs: Ir. Sutami as Head of Civil Engineering Study Program, Ir. Ahmad Sayuti as Head of Mechanical Engineering Study Program and Ir. K. Hadinoto as Head of Electrical Engineering Study Program.

The Metallurgy and Architecture Study Programs were opened the following year with their respective Head of Study Programs: Dr. Ing. Purnomosidhi H. and Ir. Sunaryo S.. Ir. Roosseno as Dean was assisted by Ir. Sutami as Vice Dean for Academic Affairs, Ir. Slamet Bratanata as Vice Dean for Administration and Finance and Dr. Ing Purnomosidhi H. as Vice Dean for Student Affairs and Alumni. In its early activities in 1964, Faculty of Engineering UI was supported by 30 lecturers and 11 non-academic employees offering a 32 course subject curriculum. The first class of Faculty of Engineering UI consisted of 199 students. In five and a half years, 18 of them had successfully completed their study and graduated as certified Engineers.

In 1985, the study program Gas Engineering (originally under the Metallurgy Study Program) joined the study program Chemical Engineering (originally under the Mechanical Study Program) and formed the Gas and Petrochemical Engineering Study Program with its first Head of Study Program, Dr. Ir. H. Rachmantio. The Industrial Engineering Study Program, the youngest Study Program in Faculty of Engineering UI, was opened in 1999 with its first Head of Study Program, Ir. M. Dachyar, M.Sc. The term Study Program was later changed to Department and is still used today.

1.2. VISION AND MISSION OF FTUI

FTUI Vision

FTUI as a leading engineering education institution with the ability to compete in the international world.

FTUI Mission:

- Preparing its graduates to become lifelong learners, to be able to adapt to the working environment, and to acquire decent personalities and leadership qualities.
- To be center of excellence for education and research activities, to serve stakeholders' needs through facilitation of conducive academic environment.
- To be a leading institution with the initiatives that responds to local, national and global societal needs.

1.3. UI and FTUI Administration

UI

Rector:

Prof. Dr. Ir. Muhammad Anis. M. Met.

Deputy Rector for Academic and Student Affairs:

Prof. Dr. Bambang Wibawarta, S.S., M.A.

Deputy Rector for Finance, Logistic and Facilities:

Prof. Dr. Adi Zakaria Afiff

Deputy Rector for Research, and Innovation

Prof. Dr. rer. nat Rosari Saleh

Deputy Rector for for Human Resources, Development and Cooperation

Dr. Hamid Chalid, S.H., LL.M

FTUI

Dean of Engineering:

Prof. Dr. Ir. Dedi Priadi, DEA

Vice Dean I:

Dr. Ir. Muhamad Asvial, M.Eng

Vice Dean II:

Dr. Ir. Hendri DS Budiono, M.Eng

Associate Dean for Academic and Head of Faculty Administration Center:

Dr. Ir. Wiwik Rahayu, DEA

Associate Dean for Research & Community Service

Prof. Dr. Ir. Akhmad Herman Yuwono, M.Phil.Eng

Associate Dean for Cooperation, Students Affairs, Alumni & Venture :

Dr. Badrul Munir, ST., M.Eng.Sc

Associate Dean for General Affairs & Facilities

Jos Istiyanto, S.T., M.T., Ph.D

Head of Academic Quality Assurance Unit

Prof. Ir. Mahmud Sudibandriyo, M.Sc., Ph.D

Head of Management System Assurance Development Unit

Dr. Ir. Rahmat Nurcahyo, M.Eng. Sc.

Departments

The following are list of Head of Department, and Vice Head of Department:

Civil Engineering:

Prof. Ir. Widjojo A. Prakoso, M.Sc., Ph.D

Mulia Orientilize, S.T., M.Eng

Mechanical Engineering:

Dr.-Ing. Ir. Nasruddin, M.Eng

Dr. Ario Sunar Baskoro, ST., MT., M.Eng

Electrical Engineering:

Ir. Gunawan Wibisono, M.Sc., Ph.D

Dr. Arief Udhiarto, S.T., M.T

Metallurgy & Materials Engineering:

Dr. Ir. Sri Harjanto

Dr. Deni Ferdian, ST, M.Sc

Architecture:

Prof. Yandi Andri Yatmo, S.T., M.Arch., Ph.D

Rini Suryantini, S.T., M.Sc

Chemical Engineering:

Prof. Ir. Sutrasno Kartohardjono, M.Sc., Ph.D

Dr. Ir. Nelson Saksono, M.T.

Industrial Engineering:

Dr. Akhmad Hidayatno, S.T., MBT.

Dr.-Ing. Amalia Suzianti, ST., M.Sc.

BOARD OF PROFESSORS

Prof. Dr. Ir. Budi Susilo Soepandji

Prof. Dr. Ir. Sutanto Soehodo, M. Eng

Prof. Dr. Ir. Tommy Ilyas, M.Eng

Prof. Dr. Ir. Irwan Katili, DEA

Prof. Dr. Ir. I Made Kartika, Dipl. Ing.

Prof. Dr. Ir. Raldi Artono Koestoer

Prof. Dr. Ir. Bambang Sugiarto, M.Eng

Prof. Dr. Ir. Yanuar, M.Eng

Prof. Dr. Ir. Tresna P. Soemardi

Prof. Dr. Ir. Budiarto, M.Eng

Prof. Dr. Ir. Yulianto S. Nugroho, M.Sc

Prof. Dr.-Ing. Nandy Putra

Prof. Dr. Ir. Djoko Hartanto, M.Sc

Prof. Dr. Ir. Dadang Gunawan, M.Eng

Prof. Dr. Ir. Bagio Budiardjo, M.Sc

Prof. Dr. Ir. Eko Tjipto Rahardjo, M.Sc

Prof. Dr. Ir. Harry Sudibyo

Prof. Ir. Rinaldy Dalimi, M.Sc., Ph.D

Prof. Dr. Ir. Rudy Setiabudy, DEA

Prof. Dr. Ir. Iwa Garniwa, MK., MT

Prof. Dr. Ir. Muhammad Idrus Alhamid

Prof. Dr.-Ing. Ir. Bambang Suharno

Prof. Dr. Ir. Bondan T. Sofyan, M.Si

Prof. Ir. Triatno Yudo Harjoko, M.Sc., Ph.D

Prof. Dr. Ir. Abimanyu Takdir Alamsyah, MS

Prof. Dr. Ir. Widodo Wahyu P, DEA

Prof. Dr. Ir. M. Nasikin, M.Eng

Prof. Dr. Ir. Anondho W., M.Eng

Prof. Dr. Ir. Setijo Bismo, DEA

Prof. Dr. Ir. Slamet, M.T

Prof. Dr. Ir. T. Yuri M. Zagloel, M.Eng.Sc

Prof. Ir. Sutrasno Kartohardjono, M.Sc., Ph.D

Prof. Dr. Ir. Yusuf Latief, MT

Prof. Dr. Ir. Dedi Priadi, DEA

Prof. Dr. Ir. Harinaldi, M.Eng

Prof. Dr. Ir. Djoko M Hartono, SE., M.Eng

Prof. Dr. Ir. Muhammad Anis, M.Met

Prof. Ir. Isti Surjandari Prajitno, MT., MA., Ph.D

Prof. Dr. Ir. Danardono Agus S, DEA

Prof. Dr. Ir. Nji Raden Poespawati, MT

Prof. Dr. Ir. A. Herman Yuwono, M.Phil.Eng

Prof. Yandi A. Yatmo, S.T., M.Arch., Ph.D



Prof. Dr. Ir. Riri Fitri Sari, M.Sc.MM	Prof. Dr. Kemas Ridwan Kurniawan, ST., M.Sc
Prof. Dr. Benyamin Kusumoputro, M.Eng	Prof. Dr. Ir. Adi Surjosatyo, M.Eng
Prof. Dr. Ir. Kalamullah Ramli, M.Eng	Prof. Ir. Widjojo Adi Prakoso, M.Sc., Ph.D
Prof. Dr. Ir. Eddy S. Siradj, M.Sc	Prof. Dr. Ir. Winarto, M.Sc
Prof. Dr. Ir. Johny Wahyuadi Mudaryoto	Prof. Dr. Ing. Ir. Misri Gozan, M.Tech.
Prof. Dr. Ir. Anne Zulfia, M.Sc	Prof. Dr. Ir. Nelson Saksono, MT
Prof. Ir. Mahmud Sudibandriyo, M.Sc., Ph.D	Prof. Paramita Atmodiwirjo, S.T., M.Arch., Ph.D.
Prof. Dr. Heri Hermansyah, S.T., M.Eng.	Prof. Dr. Ir. Gandjar Kiswanto, M.Eng
Prof. Dr. Ir. Sigit P. Hadiwardoyo, DEA	

INTERNATIONAL ADJUNCT PROFESSOR

Prof. Dr. Fumihiko Nishio, fnishio@faculty.chiba-u.jp (Fundamental Research Field of Remote Sensing: Snow and Ice), Center for Environmental Remote Sensing (CERES), Chiba University, Japan.

Prof. Dr. Josaphat Tetuko Sri Sumantyo, jtetukoss@faculty.chiba-u.jp (Fundamental Research Field of Remote Sensing: Microwave Remote Sensing), Center for Environmental Remote Sensing (CERES), Chiba University, Japan.

Prof. Dr. James-Holm Kennedy, jhk@pixi.com (Electronic & optical beam management devices, micromechanical sensors, chemical & biochemical sensors, novel electronic devices, force sensors, gas sensors, magnetic sensors, optical sensors.), University of Hawaii, USA.

Prof. Dr.-Ing. Axel Hunger, axel.hunger@uni-due.de (Adaptive e-Learning, adaptive instructional systems, e-course and its applications, pedagogical analyses of on-line course), University of Duisburg Essen, Germany.

Prof. Dr. Koichi Ito (Printed Antenna, Small Antenna, Medical Application of Antenna, Evaluation of Mutual Influence between Human Body and Electromagnetic Radiations), Chiba University, Japan.

Prof. Masaaki Nagatsu, tmnagat@ipc.shizuoka.ac.jp, (Plasma Science and Technology) Research Institute of Electronics, Shizuoka University

Prof. Michiharu Tabe, tabe.michiharu@shizuoka.ac.jp, (Nano Devices) Research Institute of Electronics, Shizuoka University

Prof. Hiroshi Inokawa, inokawa06@rie.shizuoka.ac.jp, (Nano Devices), Research Institute of Electronics, Shizuoka University

Prof. Hidenori Mimura, mimura.hidenori@shizuoka.ac.jp, (Vacuum Electron Devices) Research Institute of Electronics, Shizuoka University

Prof. Chit Chiow (Andy) Tan, School of Mechanical, Manufacturing and Medical Engineering, Queensland University of Technology, Australia, Mechanical Engineering

Prof. Kozo Obara, Dept. of Nanostructure and Advanced Materials, Kagoshima University, Japan, Nanomaterial dan Energi

Prof. Freddy Y.C. Boey, Nanyang Technological University, Singapore, Nanomaterial dan Biomedical Engineering

Prof. Kyoo-Ho Kim, Dr.Eng, School of Material Science and Engineering, Yeungnam University, Korea, Nanomaterial dan Energi

Prof. Bernard Cambou, Ecole Centrale de Lyon, France, INRETS (French National Institute for Transport and Safety Engineering), Transport and Safety

Prof. Chia-Fen Chi, Dept. of Industrial Engineering, National Taiwan University Science and Technology, Industrial Management

Prof. Dr. Katsuhiko Takahashi, Dept. of Artificial Complex Systems Engineering, Hiroshima University, Japan, Artificial Complex System Engineering

Prof. Martin Betts, Faculty of Built Environment and Engineering, Queensland University of Technology, Australia.

Prof. L. P. Lighthart (Emeritus), Delft University of Technology, Dutch

Prof. Dr. Koichi Ito (Printed Antenna, Small Antenna, Medical Application of Antenna, Evaluation of Mutual Influence between Human Body and Electromagnetic Radiations), Chiba University, Japan.

Prof. Dr. Uwe Lahl

Prof. Dr. Tae Jo Ko

tjko@yu.ac.kr (BSc. Pusan National University; MSc. Pusan National University; Ph.D Pohang Institute of Technology) Micromachining, Nontraditional Manufacturing, Machine Tools

Prof. Dr. Keizo Watanabe

keizo@tmu.ac.jp (MSc. Tokyo Metropolitan University, 1970; Dr-Eng. Tokyo Metropolitan University, 1977) Drag Reduction, Fluid Mechanics

Prof. Philippe Lours, École nationale supérieure des mines d'Albi-Carmaux, (France) Superalloys, aerospace material

1.4. ACADEMIC PROGRAMS AT FTUI

FTUI consists of seven Departments and **twelve Undergraduate Study Programs**:

- | | |
|-------------------------------|--|
| (1) Civil Engineering | (7) Metallurgy & Materials Engineering |
| (2) Environmental Engineering | (8) Architecture |
| (3) Mechanical Engineering | (9) Interior Architecture |
| (4) Marine Engineering | (10) Chemical Engineering |
| (5) Electrical Engineering | (11) Bioprocess Engineering |
| (6) Computer Engineering | (12) Industrial Engineering |

seven Master Programs:

- | | |
|---|----------------------------|
| (1) Civil Engineering | (5) Architecture |
| (2) Mechanical Engineering | (6) Chemical Engineering |
| (3) Electrical Engineering | (7) Industrial Engineering |
| (4) Metallurgy and Material Engineering | |

and **seven Doctoral Programs:**

- | | |
|---|----------------------------|
| (1) Civil Engineering | (5) Architecture |
| (2) Mechanical Engineering | (6) Chemical Engineering |
| (3) Electrical Engineering | (7) Industrial Engineering |
| (4) Metallurgy and Material Engineering | |

and **one Professional Program for Architect**

Accreditation of FTUI Academic Programs

The National Board of Accreditation for Higher Education (BAN-PT) has awarded the following accreditation level for all study program in the Faculty of Engineering:

for Bachelor Programs:

Civil Engineering : A	Industrial Engineering : A
Mechanical Engineering : A	Naval Architecture & Marine Engineering : A
Electrical Engineering : A	Computer Engineering : B
Metallurgy & Material Engineering : A	Environmental Engineering : B
Architecture : A	Architecture Interior : A
Chemical Engineering : A	Bioprocess Engineering : A

Accreditation for Master Program is as follows:

Civil Engineering : A	Architecture : A
Mechanical Engineering : A	Chemical Engineering : A
Electrical Engineering : A	Industrial Engineering : B
Metallurgy and Materials Engineering : A	

Accreditation for Doctoral Program is as follows:



Civil Engineering : A	Chemical Engineering : A
Electrical Engineering : A	Mechanical Engineering : A
Metallurgy and Materials Engineering : A	Architecture : B

In 2008 & 2010, the Departments of Mechanical Engineering, Civil Engineering, Electrical Engineering, Metallurgy and Materials Engineering, Architecture and Chemical Engineering have been accredited by the Asean University Network (AUN); and also In 2013 Departments of Industrial Engineering have been accredited by the ASEAN University Network (AUN).

International Undergraduate Program (Double-Degree & Single Degree)

Since 1999, Faculty of Engineering has established an international undergraduate program in engineering (double-degree program) with the following renowned Australian higher education institutions: Queensland University of Technology (QUT), Monash University, Curtin University of Technology, The University of Queensland and The University of Sydney. Graduates from this international undergraduate program will be awarded a Bachelor of Engineering degree from our Australian University partner and a Sarjana Teknik degree from Faculty of Engineering UI when they return to FTUI and fulfill certain requirements. The double degree cooperation with QUT involves the study programs Civil Engineering, Mechanical Engineering, Electrical Engineering and Architecture. The double degree cooperation with Monash University involves the study programs Metallurgy & Material Engineering and Chemical Engineering. The double degree cooperation with Curtin University involves the study programs Chemical Engineering, Architecture, Metallurgy & Material Engineering and Electrical Engineering, with other study programs to follow. The double degree cooperation with the University of Queensland involves the study programs Mechanical Engineering, Electrical Engineering, Chemical Engineering and Metallurgy & Material Engineering. This international undergraduate program provides high quality engineering education in the international level. Since 2011, students will also have a choice to continue their final two years at FTUI as part of the newly opened Single Degree International Program.

Since 2011, students will also have a choice to continue their final two years at FTUI as part of the newly opened Single Degree International Program. The undergraduate international single degree program was launched in 2011 as a result of an increasing demand to provide an international quality education locally. Students in this program are not obligated to continue their last four semester of study at one of our partner universities like their classmates who wishes to pursue a double degree. However, students of single degree program are required to do Study Abroad for a period between one to four semesters at an overseas university. The aims are to widen the international perspective of the students, to have experience to study in an overseas university, to enhance language capability, to enhance cross-cultural adaptability. Study Abroad can be conducted during regular semesters.

Undergraduate Parallel Class Program (Diploma Track) (Extension Program)

The Undergraduate Extension Program in FTUI was initiated in 1993. At the beginning the program was held for only four Study Programs (Civil, Mechanical, Electrical and Metallurgy Engineering). In 1995 the program was also opened for the Chemical Engineering Study Program (Gas and Petrochemical Engineering) followed by Industrial Engineering in 2002. Starting in 2011, the Undergraduate Extension Program of FTUI was cancelled. However, the faculty still give the opportunity for future FTUI students that are graduates from Diploma Program who wishes to continue their study into the FTUI Undergraduate Program. Students are now able to apply through the Undergraduate Parallel Program (Diploma Track) by using the Credit Transferred System. The number of credits acknowledge will be decided by their respective Departments.

The Undergraduate Parallel Program is a full time program where students are expected to be a full time students in campus. This is due to the schedule set for the program which started from the morning period and well into the afternoon. Currently there are six Study Programs available to choose from: Civil Engineering, Mechanical Engineering, Electrical Engineering, Metallurgy & Material Engineering, Chemical Engineering, Industrial Engineering.



1.5. DEPARTMENT OF ARCHITECTURE

GENERAL

Department of Architecture at the Universitas Indonesia (formerly known as Architectural Engineering Major) was established in 1965 under the UI Faculty of Engineering (FTUI) in Jakarta (established a year earlier through Presidential Decree No. 76 dated July 17, 1964). In the early days, education at the FTUI Architectural Engineering was done through a system of per-level or per-year full professional education. The average completion time was 7 years with an Engineer (Ir.) degree. Then in 1978, the Semester Credit System (SKS) went into effect with a minimum number of acquired semester credit units of 160 credits. The average duration of the study was five years, and the title was still Engineer (professional education). Since 1996, a four-year bachelor's education program was implemented with a total of 144 credits, producing an academic degree Bachelor of Engineering (ST). In the same year, after 31 years of existence, Architecture Program of Study at UI received its decree by the Directorate General for Higher Education No. 215/DIKTI/ KEP/1996 dated July 11, 1996.

In 2000, Department of Architecture streamlined the 1996 curriculum by publishing the 2000 Curriculum along with the application of problem-based learning method, collaborative and student-centered learning. The 2000 Curriculum stated clearly, that the direction for bachelor's architecture education is pre-professional.. In the same year, Master of Architecture program was established with 2 streams , namely Architectural Design and Urban Design. Over the years, the master's program has grown into 6 streams, in addition to the two already mentioned earlier, the specialization program of Urban Housing and Settlements, Real Estate, History and Theories of Architecture and Urbanism and Building Technology and Sustainability were established. At this time, through the new curriculum (2012 Curriculum), the six specializations were streamlined into three which are:

- Creative process stream: Architectural Design, Urban Design, Property Development
- Humanities stream: History and Theories of Architecture, Urban Housing and Settlement
- Technology and sustainability stream: Architecture and Technology

In 2004, Architectural Engineering Major changed to Department of Architecture. The degree for its graduates was also altered from Bachelor of Engineering (ST) to Bachelor of Architecture (S.Ars) for the bachelor graduates and Master of Architecture (M.Ars) for the master's. From 2000 until 2012, the Department of Architecture went through several changes in Curriculum and thus the curriculum is integrated and emphasize several points:

1. flexibility in following the development of science and technology.
2. Curriculum that responses in fulfilling the demands of professionals within national, regional and also international level.
3. Referring to the National Education System based on Competence. The core of the curriculum is in respect to the profession of architect in collaboration with IAI, and refers to UIA as the international standards..

In 2008 a new study program, Interior Architecture Undergraduate Program is opened), which emphasizes the of interiority aspects of the design in architecture. The opening of this Interior Architecture study program allows the opportunity to explore and develop the field of interior architecture in Indonesia.

In 2009 a PhD program and a one-year program of Professional Program of Architect (PPAR) are set. Ph.D program is intended to strengthen the Department of Architecture as a leading architectural research-based institution. PhD student's research is focused on two areas: major research areas (research based on architectural issues) and minor research area (related to specialized area of study) in which PhD program students have the opportunity to take courses outside the discipline of architectural discipline to specifically support the knowledge, thoughts, and methods of its major. The learning process is conducted through the exploration of the width and depth aspects of knowledge about the studied issues. Meanwhile, for PPAR, the education is carried in a year to

complete graduates with the actuality of professional architecture practice. Graduates of PPAR are also allowed to transfer the credit in UI to continue for a master degree in architecture.

Department of Architecture has also commenced an International Class (KKI) of undergraduate degree in architecture, with single degree program (only one semester abroad), or a double degree program (4 semesters in UI and the rest abroad). This program is in collaboration with leading universities in the world such as the Queensland University of Technology (QUT), Curtin University (Australia), University of Florida and Politecnico di Milano (Italy). In addition, S1 students who have excellent academic achievements are able to attain a Fast-Track program (4 years bachelor + 1 year master), a total of 5 years, to accomplish a Master Degree in Architecture..

The Department of Architecture UI has an A accreditation from the Higher Education BAN, Indonesian Ministry of Research and Higher Education.). The Undergraduate Program Department of Architecture program has been also assessed by the ASEAN University Network (AUN) in 2010. For more profiles of FTUI Department of Architecture can be viewed at the website: <http://architecture.ui.ac.id>.

VISION and MISION

VISION

Toward an excellent architectural education institution with regional and international recognition.

MISSION

To deliver excellent architectural education that leads the development of architectural knowledge and promotes meaningful application of knowledge for the society.

Corresponding Address

Department of Architecture
Faculty of Engineering, Universitas Indonesia
Kampus UI, Depok 16424
Phone: 021 - 786 3512
Fax: 021 - 786 3514
E-mail: arsitektur@eng.ui.ac.id; architecture@ui.ac.id
<http://architecture.ui.ac.id>

STAFF OF THE DEPARTMENT OF ARCHITECTURE

Head of Department:

Prof. Yandi Andri Yatmo, ST., M.Arch., Ph.D

Vice Head of Department:

Rini Suryantini, ST., M.Sc

Coordinator of Interior Architecture Program

Dr.-Ing Dalhar Susanto

Coordinator of Architecture Graduate Program

Prof. Ir. Triatno Yudo Harjoko, M.Sc., Ph.D

Head of Fabrication Lab

Paramita Atmodiwirjo, ST., M.Arch., Ph.D

Head of Photography Laboratory

Ir. Toga H. Pandjaitan, Grad. Dipl. AA

Head of Building Physics Laboratory

Ir. Toga H. Pandjaitan, Grad. Dipl. AA

BOARD OF PROFESSORS

Prof. Ir. Triatno Yudo Harjoko., Msc, Ph.D

(Ir. Architecture Universitas Indonesia, 1978; M.Sc. in Town Planning, University of Wales, UK, 1986; Ph.D in Environmental Design, University of Canberra, Professor in 2008) Architectural Design, Research Methods, Professor of Urban Housing and Settlement

Prof. Yandi Andri Yatmo, M.Arch., Ph.D

(ST, Architecture Universitas Indonesia; Dip.Arch, Univ.Of Sheffield; M.Arch, Univ. of Sheffield; Ph.D, Univ. of Sheffield) Architectural Design, Urban Architecture

Prof. Kemas Ridwan urniawan, M.Sc., Ph.D

(ST. Architecture Universitas Indonesia; M.Sc & Ph.D Bartlett School of Architecture, University of College London, UK;) Architectural Design, Architectural Theory and History, Heritage in Architecture

BOARD OF EMERITUS FACULTY

Prof. Dr. Ir. Abimanyu T. Alamsyah, M.Sc

(Ir. Architecture Universitas Indonesia, 1975; MS, Institut Pertanian Bogor, 1992: Dr. Environmental Sciences Universitas Indonesia, 2006) Urban and Regional Planning, Research Methods, Coastal Architecture.

Prof. Dr. Ir. Emirhadi Suganda, M.Sc

(Ir. Architecture Universitas Indonesia, 1975; M.Sc. Asian Institute of Technology (AIT) Bangkok, Thailand, 1991; Dr., Environmental Sciences Universitas Indonesia, 2007) Project Management, Building Technology, Architectural Design.

Prof. Ir. Gunawan Tjahjono, Ph.D., M.Arch

(Ir. Architecture Universitas Indonesia, 1979; M.Arch. University of California Los Angeles, USA, 1983; Ph.D., University of California Berkeley, USA, 1989) Architectural Design, Ethnic Architecture, Design Theories and Methods in Architecture, Professor of Architectural Design

FULL-TIME FACULTY

Ahmad Gamal

(S.Ars Architecture Universitas Indonesia; MSc, London School of Public Relation; MCP, Urban & Regional Planning, University of Illinois Urbana Champaign, USA); Dr.Phil., Urban & Regional Planning, University of Illinois Urbana Champaign, USA) Architectural Design, Urban and Regional Planning, Community Based Planning

Achmad Hery Fuad

(Ir., Architecture Universitas Indonesia; M.Eng., Waseda University, Japan) Architectural Design, Urban Design, Urban Housing and Settlements.

Antony Sihombing

(Ir. Architecture Universitas Indonesia; MPD. University of Melbourne, Australia; Ph.D. University of Melbourne, Australia) Architectural Design, Urban Housing and Settlements, Building Technology

Azrar Hadi

(Ir. Architecture Universitas Indonesia; Ph.D Universiti Teknologi Malaysia) Project Management, Urban Housing and Settlements, Building Technology, Architectural Design

Dalhar Susanto

(Ir. Architecture, Universitas Diponegoro, Semarang; Dr.-Ing. Uni. Stuttgart, Germany) Architectural Design, Building Technology, Urban Housing and Settlements.

Diandra Pandu Saginatari

(S.Ars., Architecture, Universitas Indonesia; MA, Art, Space and Nature, Edinburgh University, UK) Architectural Design, Building Technology, Urban Housing and Settlements.

Dita Trisnawan

(ST, Architecture, Universitas Gajah Mada, Yogyakarta; M.Arch, M.Suburb and Town Design, University of Miami, USA) Urban Design, Urban Architecture, Industrial Planning, Tourism Design and Real Estate

Enira Arvanda

(ST, Architecture Universitas Indonesia; Master, Instituto Europeo di Disain, Milan, Italy) Interior Architecture, Ergonomy, Furniture Design

Evawani Ellisa

(Ir. Architecture, Universitas Gajah Mada, Yogyakarta; M.Eng; Ph.D., University of Osaka, Jepang) Architectural Design, Urban Design

Hendrajaya Isnaeni

(Ir. Architecture Universitas Indonesia; M.Sc. University of Surrey, UK; Ph.D, University of Melbourne, Australia) Architectural Design & Professions, Theory of Islamic Architecture, Environmental Behavior

Herlily

(Ir. Architecture Universitas Indonesia; M.Urb.Des, University of Sydney, Australia; Ph.D Candidate, UC Berkeley, USA) Architectural Design, Urban Design Theory, Studies of Architecture and Urbanism in Developing Country, Urban Studies.

Joko Adianto

(ST, Architecture Universitas Trisakti; M.Ars, Architecture Universitas Indonesia) Architectural Design and Professions, Building Technology, Design Theory & Methods, Urban Informality.

Kristanti Paramita

(S.Ars, Architecture Universitas Indonesia; M.A, University of Sheffield, UK) Architectural Design, Communication Techniques in Architecture.

Mikhael Johannes

(S.Ars, Architecture Universitas Indonesia; M.Ars, Universitas Indonesia). Design and Method in Architecture, Digital Design and Communication Technique in Architecture.

M. Nanda Widyarta

(B.Arch, Architecture, Oklahoma University, USA; M.Arch, Architecture History & Theory, AA School of Architecture London, UK). Architectural Design, History of Art, Architectural History and Theory, Design Theory and Methods in Interior Architecture, Design Theory & Methods in Architecture, Architecture and Texts.

Nevine Rafa

(S.Ars, Architecture Universitas Indonesia; MA, Interior Design, University of Westminster, UK). Communication Techniques in Interior Architecture, Interior Design.

Paramita Atmodiwirjo

(ST, Architecture Universitas Indonesia; M.Arch. Univ. of Sheffield, UK, Ph.D Architecture, Univ. of Sheffield) Architectural Design, Design/Research Methods in Architecture, Environmental Behavior, Communication Techniques in Architecture.

Rini Suryantini

(ST, Architecture Universitas Indonesia; M.Sc., Institute for Regional Science & Planning University of Karlsruhe (TH), Germany). Architectural Design, Urban and Regional Planning, Landscape and Sustainability in Architecture.

Rossa Turpuk Gabe Simatupang

(S.Ars, Architecture Universitas Indonesia; M.Ars, Architecture Universitas Indonesia). Architectural Design, Communication Techniques in Architecture, Urban Housing and Settlements.

Teguh Utomo Atmoko

(Ir. Architecture Universitas Indonesia; MURP, University of Hawai'i, USA) Urban Design, Architectural Design, Real Estate, Heritage in Architecture

Toga H. Pandjaitan

(Ir. Architecture Universitas Indonesia; Grad. Dipl. AA, Inggris) Architectural Design, Building Physics, Photography, Ethnic Architecture

Yulia Nurliani Lukito Harahap

(ST, Architecture Universitas Indonesia; M.Des.Science, Harvard University, Dr.-Ing, RWTH

Aachen University, Germany). Architectural Design, Architectural Theory and History, Design Theory and Methods of Architecture.

PART-TIME FACULTY

Achmad Sadili Somaatmadja

(Ir., Architecture Universitas Indonesia; M.Si, Environmental Sciences Universitas Indonesia) Building Technology, Architectural Design

AA Ayu Suci Warakanyaka

(S.Ars, Architecture Universitas Indonesia; MFA, Interior Architectural Design University of Edinburgh) Interior Architectural Design

Anna Zuchriana

(S.Sn, Seni Grafis Jakarta Arts Institute/IKJ; MSn, Jakarta Arts Institute/IKJ, Jakarta). Fine Arts, Graphics Arts.

Arif Rahman Wahid

(S.Ars., Architecture Universitas Indonesia; MA Narrative Environments Narrative Environment, Interior Architecture

Ary Dananjaya Cahyono

(S.Sn, Seni Patung Bandung Institute of Technology; MFA Glasgow School of Arts) Visual Arts, Sculpture

Azrar Hadi

(Ir. Architecture Universitas Indonesia; Ph.D Universiti Teknologi Malaysia) Project Management, Urban Housing and Settlements, Building Technology, Architectural Design

Cut Intan Djuwita

(Ir. Architecture Universitas Indonesia; Environmental Design, University of Missouri, USA) Interior Design

Diane Wildsmith AIA, RIBA

(B.Arts in Architecture UC Berkeley California, USA; MSc in Architecture Carnegie Mellon University, Pittsburgh, USA; Master of International Policy and Practice George Washington University, USA) Architectural Design, Sustainability in Architecture

Endy Subijono, Ar.

(Ir, Architecture, Bandung Institute of Technology; MPP, Planning and Public Policy, Rutgers University, USA) Professional Ethics

Farid Rakun

(S.Ars, Architecture Universitas Indonesia; M.Arch, Cranbrook Academy of Arts, USA). Architectural Design, Design & Arts, Design Methods in Architecture, Fabrication Lab.

Ferro Yudhistira

(ST, Universitas Sriwijaya, Palembang; M.Ars, Architecture Universitas Indonesia) Architectural Design, Communication Techniques in Architecture, CAD/ArchiCAD

Finarya S. Legoh

(Ir, Architecture Universitas Indonesia; M.Sc.& Ph.D University of Salford United Kingdom) Building Physics, Acoustics.

Iriantine Karnaya

(Dra. Senirupa FSRD-Bandung Institute of Technology; M.Ars, Architecture Universitas Indonesia) Fine Art; Real Estate

Joyce Sandrasari

(ST, Architecture, Universitas Tarumanegara); MALD, Lighting Design, Fachhochschule Wismar, Germany). Lighting Design.

Ova Candra Dewi

(S.Ars., Architecture Universitas Indonesia, M.Sc., Urban Management, Technology University of Berlin, Dr.Ing, Technology University of Hamburg Hamburg, Germany) Environmental Engineering and Energy Economics Bioconversion and Emission Control, Architecture and Sustainability

Ratna Djuwita Chaidir

(Dra., Psychology Universitas Indonesia; Dipl. Pschy, Daarmstaat, Germany) Architectural Psychology



Siti Handjarinto

(Ir. Architecture Universitas Indonesia; M.Sc. University of Hawai'i, USA) Building Technology, Architectural Design, Building Physics, Lighting Design and Acoustics.

Siti Utamini

(Ir. Architecture, Bandung Institute of Technology) Architectural Design, Communication Techniques in Architecture.

Sukisno

(Ir. Architecture, Universitas Gajah Mada; MSi, Environmental Sciences Universitas Indonesia) Structure and Material Technology, Architectural Design, Urban Ecology

Sri Riswanti

(Dra, Interior Design, FSRD, ISI Yogyakarta; M.Sn, Seni Urban dan Industri Budaya, Jakarta Arts Institute/IKJ) Interior Design, Communication Techniques in Architecture & Interior.

Subandinah Priambodo

(Dra.ITB; MSn, Jakarta Arts Institute/IKJ) Interior Design, Furniture Construction.

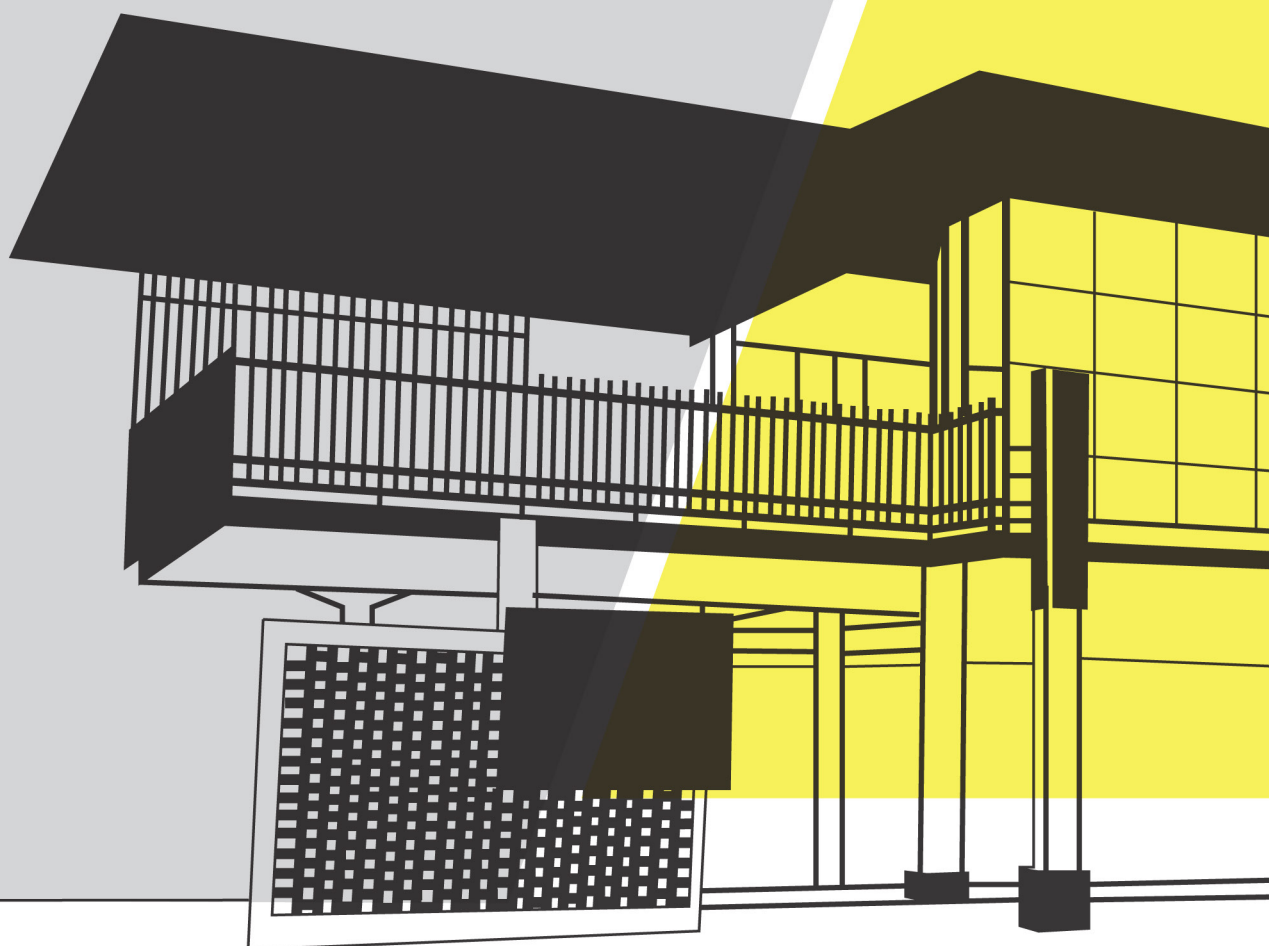
Tri Hikmawati

(ST, Architecture Universitas Indonesia; MA, London Metropolitan University, UK). Interior Design

Widyarko

(S.Ars, Arhitecture Universitas Indonesia; M.Ars, Universitas Indonesia).Building Technology and Materials

ACADEMIC SYSTEM AND REGULATION



2. ACADEMIC SYSTEM AND REGULATION

The educational system in the Faculty of Engineering, Universitas Indonesia refers to the prevailing system of education at Universitas Indonesia.

2.1. GENERAL

Teaching and Learning Activities

One semester is the time of the activity consisting of 16-18 weeks of lectures or other scheduled activities, including various additional activities such 2-3 week assessment activities. These teaching and learning activities are in form of lecture, lab, studio, exams, quizzes, assignments, presentations, seminars, research, practical work, industrial visits, and a thesis.

Semester Credits Units (SKS)

Education in the Faculty of Engineering, Universitas Indonesia is held in a variety of ways such as lectures, assignments (ex: calculation tasks, planning, design), practical work, seminars, lab, studio, and research for thesis writing. All educational activities that must be undertaken by each student to earn a bachelor's degree are contained within the academic loads and measured in units of semester credit (SKS).

Semester Credit is a measurement on the learning experiences obtained by students on each semester.

One Semester Credit in lecture, responses and tutorials, includes: face to face study time for 50 (fifty) minutes per week per semester; structured learning activities with structured assignments for 60 (sixty) minutes per week per semester; and independent study session for 60 (sixty) minutes per week per semester.

One Semester Credit in seminar or other similar subjects, includes: face to face study time for 100 (one hundred) minutes per week per semester, independent study session of 70 (seventy) minutes per week per semester.

One Semester Credit in practical training, studio, workshop, on the field training, research and community services, and /or other similar subjects for 170 (one hundred and seventy) minutes per week per semester.

Activities for one semester consist of 16-18 weeks of lectures or other scheduled activities and its additional activities. Also included in the schedule are two weeks of midterm examination and another two weeks for final examination.

All educational activities must be performed by each student to earn a bachelor's degree is an academic load of 144-145 credits divided into 8 (eight) semesters. Undergraduate students with an average study load of about 18-20 credits per semester are expected to undergo a week of minimal 18 -20 hours of scheduled interaction with a lecturer, 18-20 hours of structured activities, and 18-20 hours of independent learning activities.

Subjects

Subjects in the FTUI's undergraduate curriculum are grouped into University General Subjects (12,5%), Basic Engineering Subjects (15-20%), Basic Skills Subjects (30-35%), Core Subjects (35-40%). Subjects can be categorized as compulsory subjects and electives. They can be taken across departments or across faculties.

Grade Point Average

Grade Point Average or GPA is used to evaluate students' performance either for a particular semester in term of Indeks Prestasi Semester (IPS) or Semester Performance Index, or, cumulatively for all of the semester up to the most recent one in term of IndeksPrestasiKumulatif (IPK) or GPA. The formula used to calculate either IPS or IPK is as follows:



$$\text{GPA} = \left(\frac{\sum_{\text{courses}} (\text{Grade Point Value} \times \text{Semester Credit Unit})}{\sum_{\text{courses}} \text{Semester Credit Unit}} \right)$$

The summation made by multiplying the weight of credits with a letter grade for each course, divided by the number of credits.

Semester Performance Index / Indeks Prestasi Semester (IPS)

The Semester Performance Index is calculated from all subjects taken in each semester, except for subjects with letter grade of BS, I, and TK. Achievement Index that takes into account all of the subjects for a certain semester is called the Semester Performance Index (IPS) and used to determine the maximum academic load that the student may take in the upcoming semesters.

Grade Point Average (GPA/IPK)

If the calculation involves the entire grade point value of subjects taken during the educational program period, the result of the summation is a Grade Point Average (GPA) that is used as a basis for study evaluation. Courses taken into account are the ones listed in the Study Plan Form (FRS). GPA is obtained from the summation of all subjects having a grade of C or higher from the first semester until the last semester, with the exception of subjects with letter grade of BS, I, and TK.

Academic Performance Evaluation

Assessment of academic ability is performed on an ongoing basis by assigning tasks, homework, quizzes, or exams which are given throughout the semester. For each subject, there are at least two components of assessment which may include a midterm exam (UTS) and a final exam (UAS). A student will be assessed on his academic ability if he meets the following requirements:

- The courses taken have been registered and verified by Academic Advisor during the academic registration period.
- The student has fulfilled all of the administrative and academic requirements for the ongoing semester.
- The student has completed all of the required academic assignments.

Grades

At the end of each semester, students may download Semester Grade Record as a report on their academic performance from SIAK NG. Assessment of study efficacy is carried out using letters and academic load in accordance with Table 2.1.

Table 2.1. Grade Value and Points

Grade Value	Marks	Grade Point
A	85 - 100	4,00
A-	80 - < 85	3,70
B+	75 - < 80	3,30
B	70 - < 75	3,00
B-	65 - < 70	2,70
C+	60 - < 65	2,30
C	55 - < 60	2,00
D	40 - < 55	1,00
E	0 - < 40	0,00



The highest grade is A with grade point of 4.00 and the minimum passing grade of a course is C with grade point of 2.00. The instructor may assign the 'Incomplete' (I) grade if the student has not made a reasonable attempt to complete major session assignments, laboratory projects and the lecturer has made a reasonable effort to inform the student as early as possible that an important part of session work is incomplete. The 'I' mark should be changed to other grade within 1 month, otherwise, it will be automatically changed to 'E' grade. The "T" mark is given for no attendance in exam. The "BS" mark is given for Special Lecture (such as Internship, Seminar & Final Project) that has not been completed. These BS courses are not taken into account in the calculation of Semester Study Unit, IPS and GPA.

Length of Study and Academic Load

Undergraduate Program

The academic load a student can take is determined by the Academic Counselor based on the previous Semester Performance Index (IPS) as stated in the Study Plan Form (FRS). Students must take the entire allocated credits of the entire courses in the first and second semester. Academic Load for Undergraduate Program is 144 (one hundred and forty four) credits including final assignment and maximum academic load is 160 (one hundred and sixty) credits including final assignment and can be completed in minimum 7 (seven) semesters and maximum of 12 (twelve) semesters.

As for the second semester, these following rules apply:

- For students obtaining an IPS of 2.00 or less, they must take all credits load allocated for the second semester according to the structure of the applicable curriculum.
- For students obtaining an IPS of 2.00 or more, the maximum credits that can be taken follow that of the provisions in the Maximum Credit Load Table.
- From the 3rd semester onwards, the maximum credit loads that may be taken is determined by IPS of the previous semester and follow provisions in Maximum Credit Load as shown in Table 2.2 with respect to course prerequisites (if any). If necessary, Academic Counselor (PA) can add a maximum of 2 credits more than the provision in the Table through the approval of the Vice Dean.

Table 2.2. Maximum study load in a semester for undergraduate program

IPS	Maximum SKS
< 2,00	12
2,00 - 2,49	15
2,50 - 2,99	18
3,00 - 3,49	21
3,50 - 4,00	24

Master Program

Academic load in the FTUI's Master Program curriculum is 40-44 credits after finishing the undergraduate program with the following study period:

- For Regular Master Program, the length of study is scheduled for 4 (four) semesters and can be completed in at least 2 (two) semesters and a maximum of 6 (six) semesters.
- For Non-Regular Master Program, the length of study is scheduled for 5 (five) semesters and can be completed in at least 3 (three) semesters and a maximum of 7 (seven) semesters.

Academic Load for each semester is set by the Academic counselor (PA) based on the IPS of the last semester as stated in the Semester Grade list (DNS). Provisions on the academic load are as follows:

- A semester's academic load is registered by a student as he carries out online registration according to the pre-determined schedule. Students are required to take all subjects as allocated in the first semester curriculum.
- For students with less than a 2,5 IPS, a provision stating that the number of credits taken for the following semester does not exceed 9 credits is applicable.
- The maximum number of credits that can be taken on Master Program is 16 (sixteen) credits (for Regular Master Program) and 12 (twelve) credits (for Non Regular Master Program) per semester.

Exemption from the provisions of academic load should be with the permission of the Vice Dean.



Matriculation for Master

The Matriculation Program is aimed to synchronize the students' ability to achieve the minimum requirements to continue in the Master Program in the Faculty of Engineering Universitas Indonesia. Matriculation is done by taking classes of subjects required by each Faculty/ Study Program within the Curriculum of Undergraduate Program. The allowed credit load for this Matriculation program is 12 (twelve) credits that can be completed in 1 (one) or 2 (two) semesters. Students are allowed to continue their study in the Master Program only if they passed all Matriculation subjects within the maximum of 2 (two) semesters allowed with a Matriculation GPA of 3,00 (three point zero).

Doctoral Program

Academic load in the FTUI's Doctoral Program curriculum is 48-52 credits after finishing the Master Program, including 40 credits of research activities. A semester's academic load is registered by the student through online academic registration during a pre-determined schedule. New students are required to take all subjects as allocated in the curriculum for the first and second semesters. Students must re-take research courses with a BS grade from previous semesters. Student's Academic Load for each semester is established by the Academic Advisor (PA) or the doctorate Promoter based on a discussion with the student from the doctoral program.

The length of doctoral program for all scheduled courses is 6 (six) semesters and in its implementation can be completed in at least 4 (four) semesters and maximum of 10 (ten) semesters. Students in the Doctoral Program may be granted an extension of study period up to a maximum of 2 (two) semesters if their study time have never been extended before, have achieved a minimum grade of B for Research Result Examination, and obtained a recommendation from their promoter and a guarantee that they will complete their study within the granted extended study period. The proposal for such extension is regulated through a Rector's decree based on proposal from the Dean/ Director of School.

Undergraduate Thesis / Final Project

Undergraduate Thesis is mandatory course for undergraduate students of Faculty of Engineering UI. The course is the application of science that has been obtained in accordance with the basic scientific disciplines that the student has studied, in the form of scientific paper, engineering design, assembly or models and accessories. Undergraduate thesis is mandatory to complete the requirements in order to earn a degree in the field of engineering. Undergraduate Thesis status is equivalent to other skill courses is tailored in accordance with the scope of each study program. Undergraduate Thesis must meet certain requirements, both academic and administrative requirements. Students are allowed to start composing undergraduate thesis if:

- The Undergraduate Thesis has been registered in the Study Plan Form [FRS]
- Students have obtained a minimum of 114 credits with a minimum of grade of C and have passed all mandatory courses both in the faculty and university level.
- Students have fulfilled all prerequisites set by the Study Program.

Undergraduate Thesis can be taken in both odd and even semester in the running academic year. On SIAK NG system, student must fill out the name of his thesis supervisor and the title of thesis which will be verified by the Vice Head of the Department. At the end of the semester, the Undergraduate Thesis supervisor will submit the student's thesis's grade to SIAK NG and change the title of undergraduated thesis (if necessary). The completed undergraduated thesis must be submitted in the form of hard-covered book and CD within the pre-determined time limit. The undergraduate thesis must first be assessed in an undergraduated thesis examination by the supervisor and examiners assigned by the Head of the Department.

Thesis (Master Program)

Thesis is a report of the results of research activities in the form of scientific writing. The thesis topic should be a summary of the subject matter that can be scientifically studied on the basis of the theory and use of certain methods. Thesis should be written in Bahasa with an English abstract. For Master program students who are given the opportunity to conduct research and thesis preparation abroad, they are allowed to write thesis in English with abstracts in the Bahasa, while still following the appropriate format stated in the Final Project Writing Guideline of Universitas Indonesia. Exemption of this rule applies only to study programs that hold a joint collaboration with university's abroad as stated in the charter of cooperation.

Requirements to start making Thesis are:

- Thesis has been registered in Study Plan Form [FRS] in every semester
- Students have passed courses with a load of 20 credits with a GPA ≥ 3.00
- Head of the study program has set lecturer's name as a thesis supervisor.

Students are responsible for all thesis research costs. Students can actively meet with any of their lecturers as a potential supervisor, to request a thesis topic. In addition, in middle of the second semester, Head of the Study Program can start announcing thesis topics from which the students of the Master program could choose from to prepare the thesis proposal in the form of seminars. The Head of the Study Program announces a list of thesis supervisor who are assigned to guide the students in writing and finishing the approved topic. Thesis examination committee consists of Head of the committee, a minimum 3 or a maximum 5 examiners including the thesis supervisor. Responsible for the implementation of the thesis is the thesis coordinator in each department. Thesis counseling should be carried out with maximum of two people, Supervisor I and Supervisor II. Supervisor I should have a PhD or Master degree with a minimum of 5 years teaching experience and have expertise relevant to the student's thesis. Supervisor II should at least have a minimal master degree & have expertise relevant to the student's thesis.

Thesis can be submitted for a thesis examination when the thesis has met the following academic requirements:

- Thesis has been registered in Study Plan Form [FRS] in said semester
- The thesis has been declared eligible for examination by the Thesis Advisor
- Students have passed seminar examination and have met the requirements for thesis examination set by the study program.
- The thesis has been declared eligible for examination must be submitted to the Department to be listed in the examination schedule determined by the Head of the Study Program.
- Uploading of Summary of Undergraduate Thesis/Thesis/Dissertation

Dissertation

Dissertation preparation are done under the guidance and evaluation of Promoter with the following qualification: Full Time University Lecture; a Professor or Doctor with an academic title of Associate Professor; Have a relevant expertise with the Dissertation Topic; within the last 5 (five) years have written at least 1 (one) scientific paper published in an accredited national journal or a reputable international journal or 1 (one) other similar scientific work acknowledge by a team of expert appointed by the Academic Senate of Universitas Indonesia. Promoter may be assisted by a maximum of 2 (two) co-promoters from within the university, partner universities, or other institutions in cooperation with the promoter team. Co-promoter must have the following qualification: a full time or a part time lecture or an expert from other institution; hold a minimum title of Doctor/Ph.D with an academic title of a minimum Senior Lecture; Have a relevant expertise with the Dissertation Topic.

Internship

Internship is an out-of-campus activity to apply the scientific knowledge in a real work situation. Requirements for Internship is set up by each department and is part of the total 144 SKS. Students must find the place to carry out their internship themselves and departments will help by issuing a formal letter requesting the on-the-job training position.

For the undergraduate double degree program, students are required to complete internship when they are in the partner universities. For example in Australia internship is one of the requirements set by the Institute of Engineers Australia (IEAust) to obtain accredited B.E. (Bachelor of Engineering) degree. Internship is a good opportunity for students to apply their skills and build networks in the industry. It is strongly suggested that students should do their Internship in partner universities. However, if they cannot do so in partner universities, they are allowed to do it in Indonesia with prior permission from partner university.

Supplementary Exam

Students are allowed to take a Supplementary Examination for Mid Term and Final Examination the following condition: Sick, Grievance; or representing Universitas Indonesia in a Competition. Students with Sickness excuse are obliged to submit the application for Supplementary Exam signed by their parents/guardian and a Medical Certificate from Doctor or Hospital where they was treated; Students with Grievance or death in the family (death to Father, Mother, Older or Younger Siblings) are obliged to submit the application for Supplementary Exam signed by their parents/guardian; Students representing

Universitas Indonesia in a Competition are obliged to submit a Letter of Assignments/ Letter of Reference stating the Competition which they represented UI in. The Supplementary Exam can only be done by a written consent from the Vice Dean for Academic, Research, and Student Affairs of Faculty of Engineering Universitas Indonesia.

Credit Transfer

Credit Transfer is a recognition process of a number of credits a student may obtained from a university after an evaluation process by a Credit Transfer Team on each Faculty /School in a University. Students who have registered and study at an undergraduate study program or other equivalent education programs, both within the Universitas Indonesia or in any other universities or through a Student Exchange or Study Abroad program, may apply for a Credit transfer, provided that: (i) the transferred credits contain the same material with the courses listed in the curriculum for undergraduate program in FTUI, (ii) the academic record must be dated not more than a maximum of 5 years from the credit transfer application date, (iii) if the academic record are obtained from other universities outside of the Universitas Indonesia, the university should have at least a “B” accreditation from the National Accreditation Board for Higher Education or other international accrediting agencies. The maximum academic load that can be transferred in an Undergraduate Program is a maximum of 50 (fifty) percents of the total academic load that a student is required to complete in accordance to the curriculum of the study program he/she is currently studying. The courses transferred will be indicated with “TK” mark in the academic transcript.

Credit Transfer procedure are as follows: (i) Student submit a letter requesting Credit Transfer to the Head of the designated department, (ii) The Head of the Department will form a team to recommend which courses the student has previously taken can be transferred, (iii) Recommendation will be sent to the Dean of FTUI, (iv) FTUI Dean issues the Credit Transfer Decree, (v) The Faculty’s Center of Administration assigned “TK” marks for all relevant courses in the student’s SIAK NG account.

Credit Transfer for Parallel Class Students of Diploma Graduates

Starting in 2011, all extension programs in FTUI were merged into Parallel Classes in the Undergraduate Program. Diploma graduates who are registered as a student in these parallel classes, credits obtained from the previous diploma program will be transferred in blocks of 36-41 credits. Students begin their study in the third semester by taking all academic load according to package provided for the third semester. Afterward, they can take credits in accordance with their IPS in the following semester.

Study Abroad

There are many opportunities available for undergraduate students, both from Regular and Parallel programs to participate in Student Exchange program abroad, such as in Japan, Korea, Taiwan, Singapore, and many other countries. Student exchange programs generally last for 1-2 semesters and is supported with a full scholarship. Information on Student Exchange program can be obtained from the Universitas Indonesia’s International Office, PAU Building 1st floor. Courses taken during the study exchange program are transferrable when they return to Universitas Indonesia. Thus, students are still able to graduate on time.

In addition, Undergraduate students can participate in Double Degree 2 +2 International Undergraduate program with FTUI’s partner universities. Students participating in this program will spend the last two years studying at the partner university abroad and he will earn two degrees once he graduates. However, this Double Degree program offers no scholarships. Thus, participating students should ensure their availability of funds. Student participating in classes outside of the university (in the form of Student Exchange, International Undergraduate Dual Degree Program, Sandwich Program, Joint Degree Program, or other university acknowledge program) for at least one semester will be given an “overseas” or study outside of the university status. Before leaving to continue their study overseas, students must ensure that their status in SIAK NG has been change to “overseas”, and they are obliged to make payment to Universitas Indonesia in the amount stated in the applied Rector’s Decree of “overseas” academic fee. Period of study abroad, either on the Student Exchange program and the Double Degree, is counted as part of the whole study period. The result or grades obtained from this program will not be calculated in determining their GPA and will be given a letter grade of TK in their transcript.

Fast Track

FT UI students, Regular, Parallel or International Undergraduate Program, with brilliant academic achievements can participate in the Fast Track program. In this program, FTUI’s undergraduate students in semesters 7 & 8 are allowed to take several Master program courses. Courses that can be taken and



other requirements are specified by the Study Program in a way that the students can directly pursue Master program in FTUI and complete the program in 1 year. Thus, the total time needed to complete both undergraduate and master programs is 5 years or 10 (ten) semesters.

The Academic load for the Fast Track Program curriculum is as follow:

- a. For the undergraduate program is 144 (one hundred and forty four) credits including 16-22 credits of elective subjects taken from the main competence subjects of the Master Program.
- b. For the Master Program is 40-44 credits including the 16-22 credits from subjects mentioned in point a above and are acknowledge through credit transfer.

If student is unable to complete his/her Undergraduate Program in 8 (eight) semesters, then the student will be deemed as unable to complete the Fast Track program, making all the subjects of the Master Program he/she has taken will be considered as an elective subjects in their completion of the Undergraduate Program and cannot be acknowledge as part of their credit towards continuing to the Master Program.

Requirements and Procedure for Fast Track Registration

Undergraduate students who are interested in participating in the Fast Track Program must fulfill the following requirements:

Having a minimum GPA of 3.50

Having a minimum Institutional TOEFL/EPT score of 500 (students may use the score from the EPT test they took as new student in FTUI)

Having a high motivation for research

Procedure for Fast Track Program:

Fast Track Program is open for all FTUI undergraduate study programs which have the same specialization with the Master programs (for undergraduate study programs that have specialization).

Students who are interested in participating in the Fast Track Program are required to fill out the Registration Form downloadable through the <http://www.eng.ui.ac.id/index.php/ft/downloadindeks> (titled: (FormulirPendaftaran Fast Track Magister FTUI).

Students registering for the BeasiswaUnggulan from the Ministry of Education and Culture selection are required to fill out the BeasiswaUnggulan registration form downloadable from the same web page.

The Fast Track Registration Forms will be evaluated by a team headed by the Head of Department.

If the student's application to participate in the Fast Track scheme is approved, they are required to counsel with his/her academic advisor for the finalization of his/her Undergraduate (S1) and Master (S2) Study Plan. The student's study plan for semester 7 and 8, especially for the undergraduate Elective Course selection must be in accordance with the Compulsory and Elective Courses in their respective Master study program in line with their specialization.

Undergraduate thesis and thesis of the student are expected to be of continuous research to maximize knowledge, experience and quality research result.

The funds for the Fast Track Program will be borne entirely by the student.

Registration Form for the Fast Track Program for each running Academic Year may be submitted to each Department Secretariat on March each year at the latest.

2.2. ADMINISTRATIVE AND ACADEMIC REGISTRATION

Academic Calendar

Administrative and academic schedules in FTUI are set in accordance with the administrative and academic schedules in Universitas Indonesia as follows:

Term 1 2017/2018 *)

Administrative registration in Universitas Indonesia
July - August 2017

Academic registration in Universitas Indonesia
January - February 2017

Course period
August - December 2017



Mid-semester examination
October 2017

End of Semester Examination
December 2017

Deadline for grade assignment in SIAK-NG
January 2018

Departmental Judicium
1st, November 2017
2nd, January 2018

Faculty Yudicium
1st, November 2017
2nd, January 2018

Graduation
February 2018

Term 2 *)

Administrative registration in FTUI
January - February 2018

Academic registration in FTUI
January - February 2018

Course Period and examination
February - May 2018

Mid-semester examination
March - April 2018

End of Semester Examination
May 2018

Graduation
August 2018

Short Semester *)

Administrative Registration
June 2018

Academic Registration
May - June 2018

Course period
June - August 2018

Mid-semester Examination
July 2018

End of Semester Examination
August 2018

Note:

*) Schedules are subject to change

Note:

- Short Semester course period is held for 8 weeks, including mid-semester and final semester examinations.
- 2 credit courses consist of twice 2-hour contact per week, 3 credit courses consist of three times 2-hour contact per week, 4 credit subject consist of four times 2-hour contact per week.
- For regular undergraduate program: Faculty Basic Courses (Physics, Mathematics and Chemistry) are only available for students who wish to retake the course and have attended required lab activities.
- A student can take up to a maximum of 12 credits during the short semester.

- Courses offered are determined by the Department.
- If the number of students registered for a certain course in the Short Semester does not meet the minimum requirement, then the course will be canceled.
- Short Semester's tuition fee is not included in the normal tuition fee (BOP) and is calculated by the number of credits taken during the short term. Tuition fee for each credit is determined by FTUI.
- Payment for short semester courses must be made before the payment period is closed. Otherwise, the student's name will be automatically removed and the student is no longer considered as a participant in the short semester.

Registration and Course Guidelines

Before administrative registration takes place, FTUI publishes an academic calendar for one semester listing schedules for courses, mid-term, final-term examinations and other academic activities. The academic calendar and course schedule could be accessed at <http://www.eng.ui.ac.id>, and SIAK NG.

Administrative Registration

Administrative Registration includes payments of tuition fee and admission fee. Students are responsible for paying fees by the payment deadline. Students who do not complete the registration process by the payment deadline will not be registered at that particular semester will be included toward student's allowed length of study. Administrative registration are done by paying the tuition fee through the host-to-host system by the ATM (Automated Teller Machine) or bank teller of banks in cooperation with the Universitas Indonesia.

Academic Registration

Students should do online academic registration; consult with his/her Academic Advisor for approval and signing the Course Plan Form or Formulir Rencana Studi (FRS) during the academic registration period. The main duties of Academic Advisor are:

- Helping and directing students in their study plan particularly in selecting courses and in solving their academic problems
- Monitoring and evaluating student's academic performance during their period of study.

Students should logon to <https://academic.ui.ac.id> using username and password provided by the Office of Pengembangan Pelayanan Sistem Informasi (PPSI) UI. Students could get their username and password at PPMT (Pusat Pelayanan Mahasiswa Terpadu) building. Students could also download course schedules and academic calendar from the website.

After completing the online FRS, students should print the form (3 copies) and meet their PA to discuss, verify and validate the courses taken. Students have to check their FRS after registration period to ensure that the courses taken are correct. Fines will be levied to students for late administrative and academic registration, as per the university or the faculty regulation.

Sanctions

1. Students who do not carry out the administrative registration will receive inactive status as a student in the current semester, which is included as their length of study.
2. Students who do not carry out academic registration cannot follow the academic activities in the current semester, which is included as their length of study.
3. Students who are not active as referred to in points (1) are not charged with tuition payments.
4. Students who do not carry out the registration and administration of academic registration 2 (two) consecutive semesters, expressed as a university student resigned without notice from the university.
5. Active students who do not complete the payment in accordance with the agreement until the end of the semester goes imposed the fine of 50% of the unpaid amount.
6. Payment of fines referred to in points (5) shall be paid at the following semester Academic Registration

Exception Administrative Registration

When non-active students, with all reason intend to maintain their status as active students, they have to follow the procedure of administrative registration:



- Obtain the approval from FTUI by filling out a form available at PAF (Pusat Administrasi Fakultas/ Faculty Administrative Center).
- The students must come to the Directorate of Finance UI to obtain the approval for paying the tuition fee after paying the penalty 50% from the tuition fee on the current semester.
- The approval will be used by the students for paying the tuition fee manually.
- Students must give the copy of the payment record to the Directorate of Finance UI for verification.

Prerequisite Courses

These courses can only be taken if a student is currently taking or has previously taken and passed the prerequisite course with sufficient grade [not T].

Requirements for Transfer to Partner Universities in Australia for Double Degree Program

Minimum requirement of GPA and English before transferring to Partner University is listed in Table 2.3. Eligible students can continue their study to partner universities in Australia if they fulfill the following requirements:

1. Achieve minimum GPA as required at the end fourth semester for the 2+2 program;
2. Passed all required subjects as listed in the Study Program curriculum with minimum C with a total of passed credits consistent with the total number of credits listed in the Study Program curriculum for semester 1-4.
3. Achieve minimum IELTS or TOEFL scores as required.
4. If GPA less than required, the students must stay at UI and repeat some subjects to improve their GPA, while administratively and academically registered at FTUI.
5. If GPA meets minimum requirement, but IELTS or TOEFL scores less than minimum requirement, they are suggested to improve their IELTS or TOEFL score in Indonesia and maintain administrative registration at FTUI. Other choice is to take English for Academic Purposes (EAP) at the partner university. Information on duration and schedule of EAP can be found at the partner university's website.

Table 2.3. Minimum requirement of GPA and IELTS or TOEFL for transfer to the Partner Universities

Partner University	Minimum GPA	Minimum IELTS / TOEFL
QUT	3.0	IELTS min. 6.5 with no band lower than 6 ibT min 90 with no band lower than 22
Curtin		
UQ		
Uni Sydney		
Monash	3.2	

English Language Requirements for Undergraduate International Program Single Degree

Students of the Undergraduate International Program Single Degree (class of 2012 and after) are obligated to obtain an English certificate in IELTS (International English Language Testing System) or TOEFL iBT (Test of English as a Foreign Language -internet Based Test) with the following minimum score:

Type of Test	Overall Minimum Score	Additional Requirements
IELTS	6.5	No bands lower than 6.0
TOEFL iBT	80	No bands lower than 20

This English Language Certificate is one of the requirements before they may proceed to have their Undergraduate Thesis/ Final Project Exam. The date of said English Language Certificate is taken at least during their third semester of study.

Procedure for Study Abroad/ Student Exchange to Partner University for Undergraduate International Program Single Degree

1. Student choose a Partner University
<ul style="list-style-type: none"> Find out list of UI's Partner Universities Information on Study Abroad/ Student Exchange Information from International Office UI through http://international.ui.ac.id
2. Student contacted the selected partner University for Information on:
<ul style="list-style-type: none"> List of subjects offered and course description List of requirements/documents needed. Application and Tuition Fees. Other Documents needed.
3. Student consulted their Academic Guidance Counselor or the Vice Head of Department to determine the subjects they will take in Partner University that can be credit transferred upon their return.
4. The Head of Department issued a Letter addressed to the Vice Dean stating:
<ul style="list-style-type: none"> Name and Student ID of student participating in the Study Abroad/Student Exchange Program Name of Partner University and length of study of said program List of subjects that the students will take at Partner University.
5. The Vice Dean will assigned the Associate Dean for Academic and Head of PAF to process the student's status to "overseas" or "student exchange and issued a Reference Letter and Academic Transcript for the student.
6. Student prepare the documents needed for their Study Abroad/ Student Exchange:
<ul style="list-style-type: none"> Application Form IELTS/TOEFL iBT Other language requirement Reference Letter and Academic Transcript from the Faculty.
7. Student sends their application documents to Partnery University.
8. Student receives Letter of Offer dan Letter of Acceptance from Partner University.
9. Student makes payment and signed the Letter of Offer
10. Student applies for Student Visa to the Country where the Partner University is located.
11. Departure to Partner University

2.3. GRADUATE PREDICATE

Students are considered to have passed the undergraduate program and earned a Bachelor Degree (S.T or S.Ars) if they are: registered as an active student in Universitas Indonesia during said semester both administratively and academically; have passed all the mandatory courses and acquired a minimum of 144 credits in accordance with the applicable curriculum with "C" as the lowest grade and completed all 8 semesters scheduled academic load within 8-12 semesters; completed all administrative obligation including the return of all borrowed library and laboratory collection; and complete all obligation of their study period and/or all assignments given in accordance to the curriculum of the Study Program (including revised Final Project) with a GPA $\geq 2,00$ (two point zero). Honor predicate for graduates are determined by the student's final GPA as follow: Cum Laude (3,51 - 4,00), Very Satisfactory (3,01 - 3,51), and Satisfactory (2,76 - 3,00). For an undergraduate student to earn the Cum Laude degree, he must finished his study within 8 (eight) semesters time without retaking any courses.

Students are considered to have passed the Master program and earned a Master of Engineering or Master of Architecture Degree if they have passed all the required 40 - 42 credits, a ≥ 3.00 GPA

with “C” as the lowest grade and do not exceed study period and have met all administrative requirements. Honor predicate for graduates are determined by the student’s final GPA as follow: Cum Laude (3.71 - 4.00), Very Satisfactory (3.41 - 3.70), and Satisfactory (3.00 - 3.40). For a Master program student to earn the Cum Laude degree, his length of study must not exceed 4 (four) semesters time without retaking any courses.

Students are considered to have passed the Doctoral program and earned a Doctor Degree if they have passed all the required 48 - 50 credits, a minimum GPA of 3.00 with a minimum “C” for in-class courses and a minimum “B” for research courses, do not exceed study period and have met all administrative requirements. Honor predicate for graduates are determined by the student’s final GPA as follow: Cum Laude (3.71 - 4.00), Very Satisfactory (3.41 - 3.70), and Satisfactory (3.00 - 3.40). For a Doctoral program student to earn the Cum Laude degree, his length of study must not exceed 6 (six) semesters time without retaking any courses. The mark “BS” is not counted as course repetition. If a student’s final GPA is within the 3.71 - 4.00 range but he fail to meet the other requirements, he will be awarded the “Very Satisfactory” predicate.

2.4. ACADEMIC PERFORMANCE EVALUATION AND DROPOUT CRITERIA

Undergraduate Program

The university also requires that students maintain satisfactory academic performance during their study at FTUI and meet the following evaluation criteria to be able to continue their studies:

- Attain at least 24 credits with a minimum of C at the end of their second semester;
- Attain at least 48 credits with a minimum of C at the end of their fourth semester;
- Attain at least 72 credits with a minimum of C at the end of their sixth semester;
- Attain at least 96 credits with a minimum of C at the end of their eighth semester;
- Attain all required credit with a minimum of C at the end of their twelfth semester;

Or:

- Have the following problem: have an inactive status (empty) for two semesters in a row thus being declared as “resign” automatically from the status of Universitas Indonesia’s student by the Rector’s decree on Status Determination.
- Proven to be in violation of rules or regulations that caused the student to lose his right as FTUI students.
- Deemed unfit to continue their study based on consideration from a team of Doctors appointed by the Head of the University.

Student who still maintain satisfactory academic performance and meet the evaluation criteria to continue his study but would like to resign on his own free will may submit a written application to the Dean with a copy to the Head of the Department.

Master Program

The Maximum length of study to earn a Master Degree in FTUI is at the latest 6 (six) semesters, starting from registration time to graduation. This provision also applies to students who enroll in the FTUI Master program with a “probation” status. Students will lose their right to continue the study (dropping out) if:

- Students fail to achieve a 3.00 GPA of at least 14-18 passed credits (for regular Master Program student) or 12-14 passed credits (for non-regular Master Program student) at the end of the second semesters;
- In the end of the study period evaluation, students fail to achieve the following graduation requirements: registered as an active student in Universitas Indonesia during said semester both administratively and academically; not exceeding the maximum length of study; completed all administrative obligation including the return of all borrowed library and laboratory

collection; and complete all obligation of their study period and/or all assignments given in accordance to the curriculum of the Study Program (including revised Final Project) with a GPA $\geq 3,00$ (three point zero)

- Students who do not register academically and administratively for two consecutive semesters.
- Proven to be in violation of rules or regulations that caused the student to lose his right as FTUI students.
- Deemed unfit to continue their study based on consideration from a team of Doctors appointed by the Head of the University.

Student who still maintain satisfactory academic performance and meet the evaluation criteria to continue his study but would like to resign on his own free will may submit a written application to the Dean with a copy to the Head of the Department.

Doctoral Program

The Maximum length of study earn a Doctoral degree in FTUI is 10 (ten) semesters, starting from registration time to graduation.

Students of the Doctoral Program (Class and Research) will lose their right to continue to study (dropping out) if:

- Students who do not register academically and administratively for two consecutive semesters will be automatically considered to have resigned from UI.
- Failed to obtain a minimum of B for their Research Proposal Examination or similar exam at the end of their fourth semester;
- Failed to obtain a minimum of 50 (fifty) percent for their Research based on the judgment of the promoter team at the end of their sixth semester;
- Failed to obtain a minimum of 75 (seventy five) percent for their Research based on the judgment of the promoter team at the end of their eight semester;
- Failed to obtain the following by the end of their study period of ten semesters: produce 1 (one) scientific paper based on research for their dissertation as main writer that can be accompanied by the promoter team and has been accepted to be published in an indexed international journal (8 credits); submit proof of compliance of requirements as stated before as part of the requirements for promotion exam; submit 1 (one) Dissertation and participate in a Promotion Exam as the final step of the Doctoral Program (6-8 credits).
- Exceeded the maximum length of study (10 semesters).
- Proven to be in violation of rules or regulations that caused the student to lose his right as FTUI students.

Student who still maintain satisfactory academic performance and meet the evaluation criteria to continue his study but would like to resign on his own may submit a written application to the Dean with a copy to the Head of the Department.

Students of the Doctoral Program (Research) will lose their right to continue to study (dropping out) if:

- Students who do not register academically and administratively for two consecutive semesters will be automatically considered to have resigned from UI;
- Failed to obtain a minimum of B for their Research Proposal Examination or similar exam at the end of their fourth semester;
- Failed to obtain a minimum of 50 (fifty) percent for their Research based on the judgment of the promoter team at the end of their sixth semester;
- Failed to obtain a minimum of 75 (seventy five) percent for their Research based on the judgment of the promoter team at the end of their eight semester;
- Failed to obtain the following by the end of their study period of ten semesters: produce 1 (one)



scientific paper based on research for their dissertation as main writer and be presented at an international scientific conference and published in the proceeding as a full paper (6 credits); produce 1 (one) scientific paper based on research for their dissertation as main writer that can be accompanied by the promoter team and has been accepted to be published in an indexed international journal (8 credits); submit 1 (one) scientific paper that has been accepted to be published in a nationally accredited journal; submit proof of compliance of requirements as stated before as part of the requirements for promotion exam; submit 1 (one) Dissertation and participate in a Promotion Exam as the final step of the Doctoral Program (6-8 credits).

- Exceeded the maximum length of study (10 semesters).
- Proven to be in violation of rules or regulations that caused the student to lose his right as FTUI students.

Student who still maintain satisfactory academic performance and meet the evaluation criteria to continue his study but would like to resign on his own may submit a written application to the Dean with a copy to the Head of the Department.

2.5. ACADEMIC LEAVE

Student who wishes to be away from his/her academic endeavors at FTUI for one to two semesters, but intend to return to FTUI are eligible for academic leave of absence. Leave of absence could be only given to student who has studied at least two semesters at FTUI, unless with specific circumstances. Academic leave for special circumstances are academic leave that is given to students for an unavoidable hindrance, such as: state task, university task, or undergoing medication which prohibited said student to participate in academic activity. Academic leave is not counted as part of the length of study.

Procedures of Academic Leave

1. To obtain academic leave, a student must write a letter requesting for academic leave to the Dean before the beginning of the administrative registration period of semester.
2. If the academic leave is approved, PAF will change the status of the student as academic leave before the beginning of the administrative registration period of semester and the amount of tuition fee will automatically be changed.
3. The student must pay 25 % of tuition fee during the period of administrative registration of the intended semester.
4. If a student has been granted an academic leave but fail to pay the obligated fee due to them during the registration period, the academic leave will be canceled and the student status will revert to inactive (empty).
5. In the situation as stated above, if the student still insist on making payment after the registration period has passed, the student will be charged with a late administration registration fee in the amount stated in the regulation issued in the Rector's Academic Fee.
6. If the students fail to pay during the prescribed period of administrative registration, Exceptional Administrative Registration will apply.
7. If the Academic Leave is proposed not accordance with point (1) above, or is proposed after the semester is on, the student should pay full amount (100 %) of tuition fee.

2.6. FACULTY and DEPARTMENT JUDISIUMS

Judisium is a meeting held at both the Faculty and the Department level to decide whether a student has fulfill all academic requirements and may graduate and earn a degree in engineering based on the Department / Faculty Evaluation.

2.7. SEMESTER GRADE TRANSCRIPT, DIPLOMA and ACADEMIC TRANSCRIPTS

FTUI Central Administration Office is responsible for issuing Semester Grade Transcript, Diploma

and Academic Transcript for all FTUI's graduates. Student Academic History is issued based on student's request while the diploma and academic transcripts are issued only once at the time of the student's graduation. Contained within the Student Academic History and Academic Transcript are name, course code and grades of all courses that the students took during their study period. Also included is the student's Grade Point Average (GPA) which is calculated based on all courses' grades. Diplomas and Academic Transcripts will be handed to all graduates no later than 2 (two) months from the date of graduation.

The Semester Academic Transcript (DNS) gives the information on the student's identity (name, student ID and latest education), Academic Advisor, Faculty, Study Program, Specialty, Education Level, Subject Code, Subject Title, Credit, Letter Grade, Semester GPA, and GPA. The Semester Academic Transcript can be issued as hard copy based on a student request as required. A valid DNS is signed by official handling the academic administration in the Faculty level.

Academic Record recorded chronologically all academic activity of a student since they first registered as a student until they are no longer registered, due to graduation, drop out, or resignation. The academic status of a student of each semester is recorded in the Academic Record. The Academic Record is also used as a source of information for student, Academic Advisor, and Study Program to the success of a student study and is issued as required based on the student's request and validated by the Vice Dean of the Faculty.

Academic Transcript is given to student that has been declared as a graduate from a Study Program which is decided in a graduation determination meeting and contained information on a student identity (name, student ID, place and date of birth), previous education, education level, study program, specialty, list and code number of subjects, letter grade, number of required credits, number of obtained credits, GPA, title of the student's Final Project, diploma number and year of graduation. All subjects taken by the student, including repeated subjects and transfer credit subjects, are included in the Academic Transcript which is issued in two language, Bahasa Indonesia and English. The Academic Transcript will be given to students with no arrears of tuition fees.

Diploma is given to student that has been declared as a graduate from a Study Program which is decided in a graduation determination meeting. Diploma contained information on the identity of the diploma holder (name, place and date of birth), academic title, name and signature of the Rector and Dean, date of diploma issued, date of graduation, student ID, diploma number and signature and photo of the diploma holder. In the event that the diploma is lost or damaged, the diploma holder is allowed to request a copy of the diploma. Dean/ Vice Dean/ Director of Academic on behalf of the Rector may signed to validate a copy of diploma. Diploma will be given to students with no arrears of tuition fees.

2.8 OFFENSES AND SANCTIONS

In any particular courses, no students shall engage in any form of unethical or improper conduct, such as but not limited to examination offenses:

Utilizing unauthorized materials/notes to enhance performance during on examination.

Attempting to observe the work of another student.

Taking an examination for another person, or permitting someone else to do so.

Collaborating improperly by joint effort on discussion in anyway expressly prohibited by lecturer.

When incidents, as enumerated above occurs, the following sanctions may be imposed (as per FTUI regulation):

The student may be assigned E for the subject in question

The student may be suspended for one semester

The student may be dismissed or expelled by FTUI

If necessary, a meeting of PanitiaPenyelesaianPelanggaran Tata Tertib (Offence Settlement Committee) (PT32) may be held.

Academic Sanction for Perpetrators of Academic Cheating In Exams

- a. Academic sanction in the form of the cancellation of said exam (E grade) for student caught or proven committing academic fraud in examination process, such as working with other student, copying other student's work or giving answer to other student;
- b. Academic sanction in the form of study period cancellation (for all subjects) for said semester



- for student caught or proven committing academic fraud in examination process such as opening books, notes or other equipment planned before;
- c. Academic sanction in the form of cancellation study period for said semester and one semester suspension for student caught or proven committing academic fraud in examination process due to working together with outside person(s) outside of the examination room;
 - d. Academic sanction in the form of expulsion from the Faculty of Engineering Universitas Indonesia (expelled) for student caught or proven committing academic fraud in the examination process by replacing other examinee or by having someone else take their place;
 - e. Academic sanction in the form of expulsion from the Faculty of Engineering Universitas Indonesia (expelled) for student caught or proven committing academic fraud in the examination process for planning and carrying out the plan to help other examinee;
 - f. Other academic fraud will be handled through a hearing by the Committee of Rules and Conduct Regulation Violation (Panitia Penyelesaian Pelanggaran Tata Tertib (P3T2)) Faculty of Engineering Universitas Indonesia;
 - g. Student is entitled to an appeal with the help of their Academic Advisor and the Vice Dean for Academic, Research, and Student Affairs Faculty of Engineering Universitas Indonesia, submitted to the Faculty Academic Senate in the quest of justice.

Academic Sanction on Plagiarism and Act of Fraud in the Completion of Final Project

Plagiarism is an act of stealing ideas or thought already available in written and/or someone else's writing and used them as if it is our own ideas, thoughts and/or writing thus causing harm/loss to the original owner both material or non material, this plagiarism can be in the form of using a word, phrase, sentence, paragraph, or even a chapter of someone else's writing or book, without stating the source. Included in this is the auto plagiarism.

Auto Plagiarisme is an act of using an idea or thought repeatedly in writing or using someone's own writing in parts or whole without stating the origin published source as if those ideas or thoughts are a new idea, thought and/or writing.

Plagiarism criteria used as a based to decide a sanction focuses on the amount of idea or phrase stolen and how similar the writing in phrase, sentence, paragraph, section, chapter, and the writing as a whole. A work can be considered plagiarism if based on the verification result on the writing contained a similarity level of 35% or more with the original work. To prevent plagiarism, student is obligated to check their final work using software of anti plagiarism provided by the Faculty or University before submitting their work to their advisor/promoter/co-promoter. If such software is unavailable, student is required to check existing list of research in connection to the topic of their research and state such research in their reference of research. Student caught and proven of committing plagiarism is entitled to an appeal tried in the Study Program level to the Faculty which the Faculty will later passed on to the university through the P3T2 to be verified and processed.

In case of an active student, early sanction can be in the form of delaying the final project examination or delaying the graduation status for student who has been declared passing the final project examination. Student that has been declared as a graduate but have not received their diploma, with the approval of the Rector, the Dean may hold said student diploma while await the Rector's final decision. Academic sanction on plagiarism for active student is established through the Dean's decree based on the proposal by the Head of the Study Program or recommendation from the Faculty in one month at the latest since the date of the proposal letter was accepted by the Dean. For graduate student is established through the Rector's Decree based on the P3T2 recommendation. The heaviest academic sanction given can be in the form of cancellation of the student final project (for active student) with the obligation to write a new final project with new topic, while for graduate student the sanction is in the form of revocation of academic titles.



The act of fraud in the writing of Final Project, Essay as Exam Substitute, or Assignment, includes the usage of other person's service/ replacement/ consultant/ or other service to complete assignments in the name of said student and other manipulative act of fraud. This act does not include the usage of service for data collecting, survey, and data processing for the completion of final project of student. Sanction given to the perpetrator of said act of fraud in the completion of final project is established through the Dean's decree issued in one month at the latest since the proposal letter from the Head of Study Program is received by the Dean. The heaviest academic sanction given can be in the form of cancellation of the student final project (for active student) with the obligation to write a new final project with new topic, while for graduate student the sanction is in the form of revocation of academic titles. Active students who consciously act as a ghost writer in writing the final works for other students will be given the equivalent of student academic sanction given to the perpetrators of acts of fraud.

2.9. ACADEMIC REGULATION OF THE UNIVERSITAS INDONESIA

List of Academic Regulations at Universitas Indonesia can be accessed via <http://resipatory.ui.ac.id>.

Below is a list of Decrees that functioned as reference for education program at Universitas Indonesia

GENERAL:

Decree of the Board of Trustees Universitas Indonesia

Number: 008/SK/MWA-UI/2004 on the Amendment of Board of Trustees' Decree Number: 005/SK/MWA-UI/2004 on the Code of conduct on Campus Life in Universitas Indonesia

EDUCATION:

Decree of the Rector Universitas Indonesia

Number: 285/SK/R/UI/2003 on the Implementation Guidelines for Cross-Faculty Lectures in Universitas Indonesia

Decree of the Board of Trustees Universitas Indonesia

Number: 006 / MWA-UI/2004 on the Universitas Indonesia's Academic Curriculum

Decree of the Rector of Universitas Indonesia

Number: 491/SK/R/UI/2004 on Universitas Indonesia Education Activities Conclusion Regulations

Decree of the Board of Trustees Universitas Indonesia

Number: 001 / TAP/MWA-UI/2005 on the Establishment of Academic Degrees in the Universitas Indonesia.

Decree of the Board of Trustees Universitas Indonesia

Number 003 / TAP/MWA-UI/2005 on General Guidelines for Implementation on Universitas Indonesia's Professional Programs

Regulation of the Board of Trustees Universitas Indonesia

Number: 006 / Peraturan/MWA-UI/2005 on Student Learning Outcomes Evaluation at Universitas Indonesia

Regulation of the Board of Trustees Universitas Indonesia

Number: 007 / Peraturan/MWA-UI/2005 on Academic Education Implementation Norms in Universitas Indonesia



Number: 008 / Peraturan/MWA-UI/2005 on Professional Education Curriculum Norms in Universitas Indonesia

Decree of the Rector of Universitas Indonesia

Number: 838/SK/R/UI/2006 on Administration of Universitas Indonesia Student's Learning Outcomes

Decree of the Rector of Universitas Indonesia

Number: 012/SK/R/UI/2007 on Implementation of the of Students Learning Activity in Universitas Indonesia

Decree of the Rector of Universitas Indonesia

Number: 450/SK/R/UI/2008 on the Implementation of E-Learning in the University Indonesia

Decree of the Dean of Faculty of Engineering Universitas Indonesia

Number: 290/D/SK/FTUI/VI/2013 on the English Requirements for Undergraduate International Program Single Degree Faculty of Engineering Universitas Indonesia.

Decree of the Rector of Universitas Indonesia

Number :014 year 2016 on the Implementation of Undergraduate Program in Universitas Indonesia

Decree of the Rector of Universitas Indonesia

Number :015 year 2016 on the Implementation of Master Program in Universitas Indonesia

Decree of the Rector of Universitas Indonesia

Number :016 year 2016 on the Implementation of Doctoral Program in Universitas Indonesia

Decree of the Dean of Faculty of Engineering Universitas Indonesia

Number: 622/D/SK/FTUI/IX/2016 on Academic Sanction for Academic Fraud Perpetrator in Faculty of Engineering Universitas Indonesia.

Decree of the Dean of Faculty of Engineering Universitas Indonesia

Number: 623/D/SK/FTUI/IX/2016 on General Regulation on Supplementary Exam for Mid Term and Final Examination in Faculty of Engineering Universitas Indonesia.

Decree of the Dean of Faculty of Engineering Universitas Indonesia

Number: 624/D/SK/FTUI/IX/2016 on Academic Sanction for Plagiarism and Act of Fraud in the Completion of Final Project in Faculty of Engineering Universitas Indonesia.

RESEARCH

Decree of the Board of Trustees Universitas Indonesia

Number 002/SK/MWA-UI/2008 on University's Research Norms

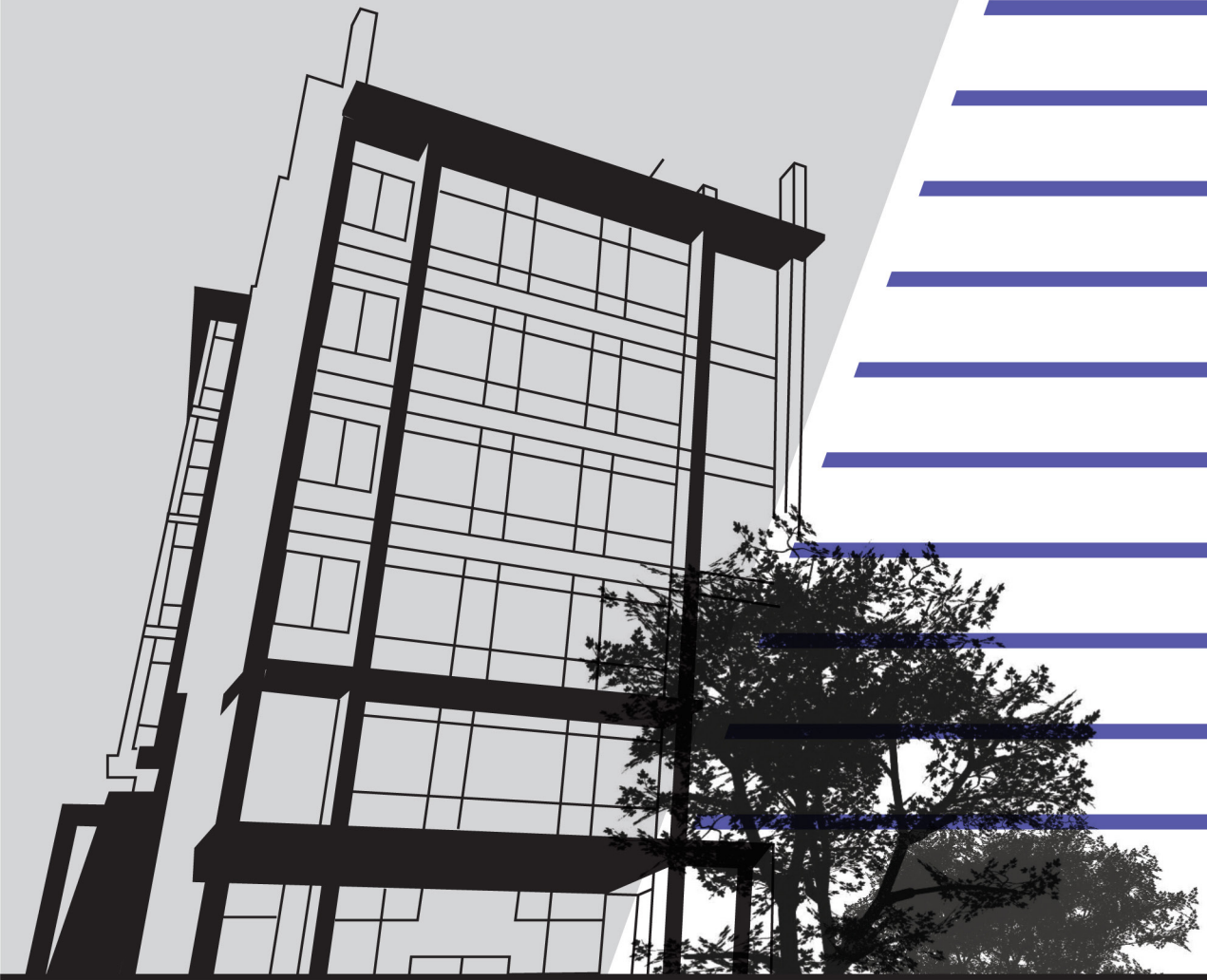
Decree of the Board of Trustees Universitas Indonesia

Number 003/SK/MWA-UI/2008 on Research Policy at Universitas Indonesia

Decree of the Board of Trustees Universitas Indonesia

Number 009/SK/MWA-UI/2008 on amendment of the Decree of the Board of Trustees of Universitas Indonesia Number 003/MWA-UI/2008 on Research Policy in Universitas Indonesia

FACILITIES AND CAMPUS LIFE



3. FACILITIES AND CAMPUS LIFE

NEW FACILITIES AVAILABLE IN FTUI

1. All classrooms in S building are now having one special chair for each classroom dedicated to left handed students.
2. FTUI has renovated the S405 classroom into a specially design discussion room for students to learn and discuss in groups in the implementation of Student-Centered Learning (SCL). This renovation is partly funded by USAID through their PEER Science research program by providing chairs, computer screen for each discussion group, wireless LCD projector and documented camera. The renovation is completed by the start of the Odd Semester of 2015. The class room will be able to accommodate up to 80 students in groups discussion form as in problem-based learning (PBL) or Collaborative Learning (CL) and up to 100 students in class room form
3. Online Electricity Metering and Monitoring System now help FTUI in monitoring electricity usage of each building and their characteristic. www.ee.ui.ac.id/power; www.eng.ui.ac.id/power
4. Offline Water Metering and Monitoring System prepare FTUI in determining the water usage of each building and help plan the creation of rain water well within the faculty.
5. Smoking is prohibited throughout most of the faculty areas. However, the new and vastly improved Smoking Shelter is now available in the student's cafeteria area and in front of the S Building.
6. Starting from April 2012, we have started to tests all of our cafeteria vendors for E-Coli. Working together with the Faculty of Public Health, we conducted several Hygiene tests to our vendors. Between these tests we also conducted seminars, socialization, and counseling to all of our food vendors regarding the level of cleanliness and hygiene level expected from them. We also improved the sewer, sink and the vendor's facilities to achieve the desired effect. By February 2015, all food vendors in our Student's Cafeteria are 100% free of E-Coli, Salmonella and Borax. Thus, making us proud to say that FTUI's Students' Cafeteria is one of the healthiest in the university.

3.1. INTEGRATED STUDENTS SERVICE BUILDING (PPMT)

This building is located at the left of the Rector building with the one door policy in serving the registration process of all Universitas Indonesia students, whether they are vocational, undergraduate, undergraduate extension, master, doctoral, specialist, and professional students. This building consists of three divisions: PPSI division, Student Affairs division, and Academic division.

3.2. FACULTY ADMINISTRATION CENTER (PAF)

Academic administrative services for all academic programs in FTUI are managed by PAF. The services provided for students include academic records, change of grades from lecturers, testamur and academic transcripts, registration, absence of leave, enrollments and letter of reference letter. The working hour is at 08.00 to 16.00 from Monday to Friday, at PAF building.

3.3. UNIVERSITY CENTRAL LIBRARY

Location : Kampus UI Depok

Service hours of UI Central Library

Monday - Friday	08.30 - 19.00 WIB
Saturday & Sunday	08.30 - 15.00 WIB
Holly Month of Ramadhan	08.30 - 15.00 WIB

Membership:

Students, lecturers, researchers and employee of the Universitas Indonesia are entitled for membership of the central library with the following requirements:



1. Provide the latest semester payment proof or the latest study card (IRS) or certification letter from any faculty, unit or department within the Universitas Indonesia.
2. Provide a 2x3 photo (one)
3. Provide a cover letter from the faculty (for lecturers)

Lending Procedures:

- General text books can be borrowed for two weeks (max. 3 books) by showing your Student Card. Borrowed books need to be stamped.
- Reference books, magazines, newspaper and thesis can only be read on the spot or photo-copied.
- Dissertation and thesis can only be photocopied as many as 10 pages.

UI Central Library Services

Reference Service

This service is provided to help the UI civitas academica in searching information, especially for students who are working on their final assignment or research. Information search request may be submitted in person or via email (reflib@ui.ac.id).

Information Package

Information package is a form of service in the form of certain topics of information packages. Each package consists of several articles and their annotation in accordance to the selected topic. Each article can be obtained by contacting the reference division first (reflib@ui.ac.id) or by direct phone request (+6221-7270751).

Information Search Training

The information search training consists of several packages. They are: basic and advance package. This training is provided to help improve the information skill of library visitors and members. This service is available to all university members, especially new students and students who are in their final year. Request for training can be submitted directly or through the email perpusui@ui.ac.id

Circulation (Borrowing Books)

The circulation services are located in level 1

The library's collection of reference books, thesis, dissertation, research reports and UI-ana can only be read on the spot at the UI Central Library.

UI Central Library Facilities

OPAC (Online Public Access Catalog)

OPAC is a tool to search the information regarding the available collection of the library by using a terminal computer. OPAC computers are available on every floor of the library.

Internet Access

Internet access connection at the UI central library uses the integrated network (JUITA - Jaringan Terpadu) and can also be accessed by using the UI Hotspot. Internet service is also available at the first floor of the central library. Also available are computers with internet access for the usage of library visitors and members.

Computer, Scanner and Data Backup

Students are allowed to use the provided computers to work on their assignments, picture/photo scanning and to burn the result of their information search to a CD.

Photocopy

A photocopy machine is available at the UI Central Library



Discussion, Class and Seminar Rooms

Discussion, Class and Seminar rooms are available for students' needs and for classes.

Special Study Rooms

Special study rooms are available and can be used by all university members. These rooms are equipped with a desk, filing cabinet and internet access.

Locker

250 lockers are available for UI Central Library Members.

3.4. COMPUTER SCIENCES & NETWORK

Directorate of Information System Development and Service (PPSI) are responsible for the programmed computer network system designed to help fulfill the students and lecturers needs in computer usage (from academic activities such as programming to internet usage) through the Integrated UI network (JUITA).

Requirements for using the JUITA:

- Registered as a UI student
- Fill out registration form with a reference from the Associate Dean for Students Affairs/ Head of Study Program/Academic Counselor of the student.

Place of Registration:

- Depok (Integrated Student Service Center Building)
- Salemba (PUSILKOM Building)

Hotline Service

Users who are experiencing problems in the use of this facility can report or request the help of the Computer Technical Unit through the following PPSI hotline service:

Phone : +6221-7863419
 Email : support@ui.ac.id
 Web Site : http://cso.ui.ac.id
 Office Hours : Monday - Friday
 (09.00 - 16.00)

Puskom Services at FTUI

Puskom (Pusat Komputer) provides services related to education and information technology development for students and academic/non-academic staff. The office is located at 2nd floor of GK Building at FTUI, Depok Campus. Main duties of Puskom is to provide education facilities for students, learning and research facilities for lecturers, and services for education administration, students and personnel. Puskom also provides connection services to internet and local area network at the Faculty and the University. Internet can be accessed at all area of FTUI. This facility can be used by students as well as faculties. All computer networks have been connected by fiber optic cables for inter-building and copper cable in the buildings with capacity of 100 Mbps. Besides providing local networks, Puskom also controls 7 computer servers with redundancy backup to minimize troubles in academic and research services. Computers are also available for students at various locations at FTUI i.e. computer laboratory at 2nd floor of GK Building, as well as at FTUI building at Salemba Campus. The service hour is 09.00 to 16.00 from Monday to Friday. For further information please contact Puskom at GK Building, 2nd floor, tel. 021-7863508, 021-2720011 ext. 64, or send email to puskom@eng.ui.ac.id.

3.5. STUDENT WELFARE**3.5.1. UNIVERSITAS INDONESIA MOSQUES**

- The Ukhuwah Islamiyah (UI) Mosque Depok located in the UI Depok Campus. Established on

28 January 1987 for the Friday prayer with Prof. H. Moh. Daud Ali, SH as khatib (preacher). This mosque was named Ukhuwah Islamiyah for within this mosque is fostered the Islamic brotherhood within the campus as well as the unity and brotherhood of Moslem from within and outside of campus area.

- The Arif Rahman Hakim (ARH) Mosque Salemba is located in the UI Salemba Campus. Established on 10 November 1967, 27 Rajab 1387 H. Based on the UI Rector Decree dated 16 August 1966, a development committee was established and consist of students. The vision of this mosque is to be the center of Islam education in the campus and produces modern Moslems (equipped with faith and knowledge) that can implement the teachings of Islam and help solve religious problems.

3.5.2. TEKSAS BRIDGE

The Teksas Bridge is a linkage bridge between two faculties in the UI Depok campus, the Faculty of Engineering and the Faculty of Humanities. These two faculties are separated by an 80 meters lake. The Teksas Bridge is hoped to serve as:

- As a connection bridge and “Landmark”
- As a research object for steel application product
- As a promotional tool on “Aesthetics Steel”

The concept of this bridge aims towards two approach:

- The side of the bridge on the Faculty of Engineering UI reflects a powerful and masculine character symbolized with a “Sail” shaped Pylon Bridge soaring to the sky as a symbol of “LINGGA”.
- The side of the bridge on the Faculty of Humanities UI reflects a flexible and feminine character symbolized with a “Hole Gate” shaped Pylon Bridge as a symbol of “YONI”.

3.5.3. CAMPUS BUS

To serve the transportation needs of students within the campus, Universitas Indonesia provides 20 campus busses. These busses will serve inside campus routes from these times: 07.00-21.00 (Monday-Friday) and 07.00-14.00 (Saturday). These yellow campus busses have two different routes:

- Blue: UI Dormitory, Gerbatama, UI Train Station, Faculty of Psychology, Faculty of Social and Political Science, Faculty of Humanities, Faculty of Economics, Faculty of Engineering, KuKel, Student Center Building, Faculty of Mathematic and Natural Sciences, Faculty of Public Health, Balairung, UI Mosque, and Faculty of Law.
- Red : UI Dormitory, Gerbatama, UI Trains Station, Faculty of Law, UI Mosque, Balairung, Faculty of Public Health, Faculty of Mathematic and Natural Sciences, Student Center Building, KuKel, Faculty of Engineering, Faculty of Economics, Faculty of Humanities, Faculty of Social and Political Science, and Faculty of Psychology.

Executive Bus

In order to provide transportation service, especially outside campus transportation, Universitas Indonesia provides Air Conditioned and Non-Air Conditioned busses for rent. These busses are available for various types of activity, such as: UI student organization activities, academic support activities, and many more.

Rental Procedures:

- Written rental request is submitted to:
Directorate of Student Affairs
Integrated Student Service Center
Building, Kampus UI Depok
Phone : +6221-7867222 (Operator)
Fax : +6221-7863453
- Payment should be made, at the very latest, one week before the date of use via BNI Bank, Kampus UI Depok Branch, and Account Number: 1273000024 under the name of Universitas Indonesia.
- Proof of payment must be submitted to the Directorate of Student Affairs. Cancellation done 3 (three) days before the date of use will be charge a 10% cancellation fee from the paid rent.

Cancellation on the date of use will be charge a 30% cancellation fee from the paid rent.

3.5.4. STUDENT WELFARE AND FACILITY BUILDING (GKFM) / University Health Center

Address : Kampus UI Depok

Phone : +6221-78881019

This building is located in front of the Faculty of Engineering in UI Campus Depok. GKFM / University Health Center Building was built to better serve several important needs of the students, such as:

Polyclinic Unit

Provide a free health service to all students of the Universitas Indonesia. Students only need to provide their Student ID card to process their membership card for future medical record to receive this service. There are several services available:

a. Public Health Service

b. Dental Health Service

Service Hours:

Monday - Thursday : 08.00 - 12.30
and 14.00 - 19.00

Friday : 08.00 - 11.00
and 14.00 - 19.00

Saturday : 08.00 - 12.00

Note:

Aside from the above mentioned facilities for students which are funded by the Students Welfare and Facility Fund, GKFM in UI Depok Campus also provide facilities for blood chemistry examinations, x-ray, and cardiac examination for university members with affordable prices.

Pharmacy

The pharmacy provides free medicine for 3 (three) days for UI students who seek treatments in the Polyclinic unit. The pharmacy also provides various other medicines for first aid needs for general public purchase.

UI Student Counseling and Guidance (BKM)

In providing service in the mental welfare of the UI students, the Student Counseling and Guidance is a place where UI students can receive psychological help in dealing with academic, personal or family problems. These psychological help are given in the form of counseling and guidance. Guidance service is the provision of information (to an individual or group) with the purpose of making sure that students are able to learn and build an optimal social relationship. Counseling service is the process of giving help to students and support student in finding a way to solve his problem. Here, a counselor functions as a facilitator.

Services in the UI Student Counseling and Guidance

The routine services provided by the BKM UI are counseling and guidance services daily which are done at:

Service Time : Monday - Friday

Service Hours : 09.00 - 15.00

Place : Student Welfare Center
2nd floor, Student Welfare & Facility Center Building
UI Campus Depok

Phone : +6221-96384797

BKM UI staff of counselors consists of psychologists, psychiatrists, and academic counselors.

Problems handled by BKM UI

Generally, the problems handled by the BKM UI consist of academic, personal, family, and social



problems.

BKM UI's other services:

- Online counseling
- Peer counseling training
- Counseling training for counselor lecturers and BKM management in the faculty level.
- Coordinate meeting between BKM in the university and faculty level.
- Personality development training
- Group therapy

UI Salemba Polyclinic

For students in the UI Salemba Campus, the university also provides similar health service in the polyclinic for public health service.

Service time : Monday - Friday: 08.00 - 12.00
and 14.00 - 18.00

3.5.5. UI STUDENT DORMITORY

Location : UI Campus, Depok

Phone/Fax : +6221- 7874414 /
+6221-7874271

Capacity : 594 rooms for male students housing, 656 rooms for female students housing (including the VIP - AC rooms)

Facility : TV, cafeteria, public pay phone, public internet shops, computer rental

UI Wismarini Student Dormitory

Location : Jl. Otto Iskandar Dinata No. 38, East Jakarta, Indonesia

Phone/Fax : +6221-8195058

Capacity : 72 rooms for male students housing, 111 rooms for female students housing

Facility : Badminton court, TV, cafeteria, Table Tennis

The UI Wismarini student dormitory is provided to students from the Salemba Campus (Faculty of Medicine & Faculty of Dentistry).

Facility

- Standard housing facility: Bed, table, chair, wardrobe, shoe rack, lamp, bathroom, wash basin.
- Technology facility: Public pay phone shops, public internet shop, photocopy
- Public facility: Cafeteria, praying room, laundry service, sport facility, car/motorcycle parking areas, minimart, dormitory market

Room Specification

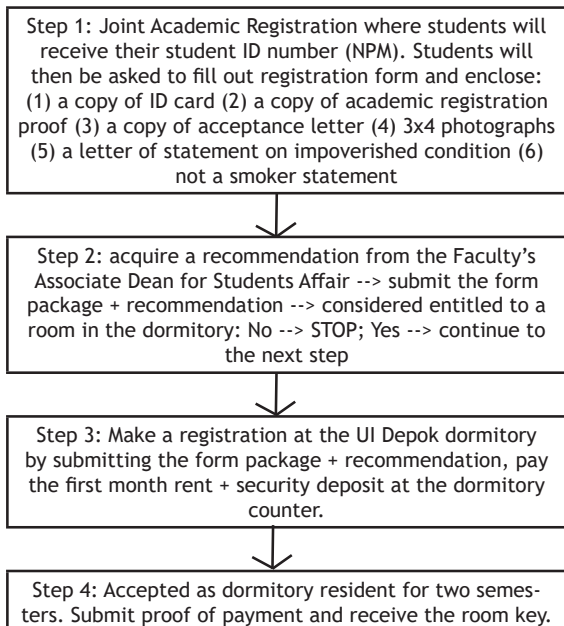
- Standard room: Standard bed, table, chair, bookcase, wardrobe, shoe rack, lamp, outdoor bathroom, non AC.
- Standard plus room: Standard bed, table, chair, book case, wardrobe, shoe rack, lamp, outdoor bathroom, air conditioned.
- Bungur and Melati room: Spring bed mattress, table, chair, indoor bathroom, wash basin, small kitchen, living room, air conditioned.
- VIP room: Spring bed mattress, table, chair, indoor bathroom, wash basin, small kitchen, living room, air conditioned.

Other information

- UI Depok dormitory has their own set of rules and regulations which must be obeyed by all dormitory residents as an attempt to create conducive environment for dormitory residents and as an attempt to maintain harmony among the various elements of the UI Depok dormi-

- tory residents.
- Each undergraduate student residents of the UI Depok dormitory are entitled to live in the dormitory for one year (semesters 1 and 2).
- Residents will be charged for every electronic device which they brought to their dormitory rooms.
- For further information, please contact UI Dormitory secretariat at +6221-78744144 or by clicking <http://asrama.ui.edu>.

Registration Process Flow Chart for UI Dormitory



3.5.6. WISMA MAKARA

Phone : +6221-78883670, 78883671
 Reservation : +6221-78883672
 E-mail : info@makara.cso.ui.ac.id
 Website : <http://www.wismamakara.com>

Wisma Makara, located within the UI Depok campus, is a choice of accommodation for the Southern Jakarta and Depok area. This hotel is very suitable for seminar, training, workshop activities. Surrounded by rubber trees and a lake; the hotel's cool, calm, and beautiful atmosphere provides the perfect background for your various activities. The hotel's tranquility also makes it very suitable for those of you who need tranquility to work and rest.

Available facilities:

- 70 fully furnished rooms
(AC, TV, refrigerator)
- Restaurant
- Swimming Pool
- Coffee Shop
- Meeting room (up to 100 person capacity)
- Pay phone shop and internet shop
- Photocopy
- Ballroom (with 800 person capacity)
- Parking area

3.5.7. UI STUDENT ACTIVITY CENTER (PUSGIWA)

Location : UI Campus Depok

Phone : +6221-7270201

Pusgiwa UI is a place for various student activities in Universitas Indonesia. Here we can find secretariat offices of various UI student organizations. Pusgiwa also provides many facilities for students' activities such as an 300-400 person auditorium.

3.5.8. UI STUDENTS HALL

Location : UI Salemba Campus

Capacity : 300 People

Phone : +6221-31901355/56

The UI Salemba Student Hall is one of the facilities in UI under the management of Directorate of Student Affairs and Alumni Relation. This hall is often used for various activities such as meetings, seminars, workshops, and many more. The hall is available for use by the university members and public.

3.5.9. SPORT FACILITIES

A. Stadium

- Football field
- Triple Jump Field
- Athletic Field

B. In Door (Gymnasium)

- Badminton court
- Volleyball court
- Basketball court

C. Out Door

- Hockey field
- Basketball court (3 lines)
- Badminton court (1 line)

Permit form or letter for the use of UI Student Activity Center (Pusgiwa), UI Student Hall, and Sport Facilities must be submitted to the Directorate of Student Affairs and Alumni Relation UI located at the Student Activity Center Building, UI Campus Depok.

Phone : +6221-7866403, 7863453

Fax : +6221-7863453

at FTUI, several sport facilities are available: basket ball court, futsal court and climbing wall.

3.5.10. BIKE TO CAMPUS

As a proof to Universitas Indonesia's commitment in implementing the "Go Green" program, UI has provided free bicycles as a mean of transportation within the campus area. Started in 2008, this program establishes collaboration with the Bike to Work and Polygon, making UI the first campus in Indonesia with their own Bike to Campus program.

These bicycles, which colors and form are specially design for UI, are single seat bicycles. By July 2009, there are around 300 units of bicycle available for use and will continue to be added in accordance with the campus development or demand.

How to Borrow:

1. Students simply showed their student ID card (KTM) to officer in charge of each bike shelter.
2. Campus bicycle can only be use on the available bicycle track. It is forbidden to ride them outside of the available track or to take them outside of campus area.
3. Each bicycle is equipped with a trunk with a maximum capacity of 10 kg and is not to be use as a passenger space.
4. Borrowed bicycle is the responsibility of each student until it is returned to the officer in

charge of each bike shelter.

5. Students may return the borrowed bicycle at the nearest bike shelter by showing their student ID card (KTM) to the officer of said shelter.

Service time for Bike to Campus is Monday to Friday, 08.00 - 17.00. For usage outside of service day and time, interested party must coordinate in accordance to the existing regulation.

A few points worth noting in cycling:

Once you've received your borrowed bicycle from the shelter officer, please do the following:

1. Make sure that your bicycle are in good order and function well.
2. Make sure that you have both hand on the bicycle handle, put your books/bags on the provided space.
3. Arrange your seat in accordance to your height, the height of your seat determines your comfort in cycling.
4. Each bicycle has three shifter levels, use them in accordance.
5. Ride the bicycle on the provided track, stay at the left side of the track when passing other bicycle.
6. Pay special care to motorcycles at each crossing.
7. Pay special attention to cycling safety.

3.6. STUDENT ORGANIZATION

Students are a nation's agent of change in making changes towards a fair and prosper independent society. Their power in fighting and struggling toward that goal must always be balanced with moral power as future asset in their fight in realizing the country's objectives. Thus, students need a vessel where all of their independent, family oriented, scientific, society oriented, and open activities can be accommodated. In Universitas Indonesia, this vessel is called Universitas Indonesia Student Society Association (Ikatan Keluarga Mahasiswa Universitas Indonesia - IKM UI).

IKM UI is a formal and legal organization which is the parent organization for all student activities in Universitas Indonesia. IKM UI adopts constitutional values adapted with the need of student lives. Sovereignty of IKM UI lies in the hand of the students and is fully implemented according to Laws and Constitution of IKM UI. The members of IKM UI are registered students in the Universitas Indonesia, consisting of active and regular members. Active members are IKM UI members that have followed active member admission procedures and received recommendation from the faculty. Regular members are IKM UI members that are not registered within the active membership of IKM UI. The symbol of the Universitas Indonesia Student Society Association (IKM UI) is the Makara of Universitas Indonesia with the wording IKATAN KELUARGA MAHASISWA UNIVERSITAS INDONESIA in black.

Student organizations that are incorporated within the IKM UI are:

1. Students Forum
2. Students Representative Council
3. Student Executive Body
4. Financial Audit Agency
5. Student Court
6. Student Element of the Board of Trustees
7. Autonomous Body of the Student Activity Unit
8. Semi Autonomous Body of the Student Activity Unit

Students Representative Council (Dewan Perwakilan Mahasiswa - DPM)

Students Representative Council is the high level body within the Universitas Indonesia Student Society Association (IKM UI) which possesses a legislative power. Members of the DPM UI consist of independent members from each faculties and representatives of legislative bodies of each faculty. Independent members are voted through a general election, while there can only be one



representative from each faculty's legislative body. Membership of DPM UI is inaugurated by a student forum decree. Term of office for members of the DPM UI is one year and ended simultaneously with the inauguration of the new members of the DPM. The requirements for becoming a member of the DPM UI are regulated within the IKM UI laws. DPM UI has the authority in term of legislative, supervision, and assessment of Students Representative Council's (BEM UI) Work Accountability Report, jurisdiction, facility, and designing the admission mechanism and follow up on financial budget plan of each student organizations within the Universitas Indonesia for each period of management. Members of the DPM UI are entitled to interpellation right, voting right, and the right to convey suggestion and express their opinions.

Secretariat : Student Activity Center
 Building (Pusgiwa), 2nd floor
 Phone : +6221-94629107,
 +6285717884964

Students Representative Council (Badan Eksekutif Mahasiswa - BEM)

Universitas Indonesia Students Representative Council is a student organization within the university level with the executive power. Term of office for UI Students Representative Council is one year, from January to December each year. Chairman and Vice Chairman of BEM UI are elected as a couple directly by members of the IKM UI in a Universitas Indonesia General Election. The elected Chairman and Vice Chairman of BEM UI are later officially inaugurated with a Student Forum Decree. Function and authority of BEM UI are, among other: advocate students in issues relating to funds and facilities at the university level; addressing the external politic policy of IKM UI; serve and coordinate with the Universitas Indonesia Autonomy Body of UKM UI, faculty's executive body, and student element of the Board of Trustees. BEM UI Board of Administrators is elected based on open and close recruitment mechanism.

Student Activity Unit (Unit Kegiatan Mahasiswa - UKM)

Student Activity Unit of Universitas Indonesia (UKM-UI) is a place of student activities and creations in the Universitas Indonesia in one area of specialization, talent and religious services at the university level. The Student Activity Unit consists of the Autonomy and Semi Autonomy Bodies. Universitas Indonesia UKM Autonomy Body is a UKM in the university level which is deemed qualified and valid by the decree of the Student Forum into an autonomic UKM UI Autonomy Body. While the Universitas Indonesia UKM Semi Autonomy Body is a place of student activities and creations in the Universitas Indonesia in one area of specialization, talent and religious services at the university level under the coordination of the Students Representative Council.

a. Art

1. Krida Budaya Dance League
2. Madah Bahana Marching Band
3. Mahawarditra Philharmonic
4. Paragita Choir
5. Student Theater

b. Sport

- | | |
|----------------|------------------|
| 1. Badminton | 8. Soft Ball |
| 2. Hockey | 9. Bridge |
| 3. Tennis | 10. Futsal |
| 4. Soccer | 11. Dance Sport |
| 5. Basket Ball | 12. Cricket |
| 6. Swimming | 13. Table Tennis |
| 7. Volley Ball | |

c. Martial Art

1. Taekwondo
2. Merpati Putih
3. Aikido



4. Wushu

d. Religious Groups

1. Moslem Student Society (Nuansa Islam Mahasiswa - SALAM)
2. Catholic Student Society (Keluarga Mahasiswa Katolik - KMK)
3. Oikumene Civitas Academica Society (Persekutuan Oikumene Sivitas Akademika - POSA)
4. Buddhist Student Society (Keluarga Mahasiswa Budhis)
5. Hindu Student Society (Keluarga Mahasiswa Hindu)

e. Academic Group

1. Eka Prasetya Student Study Group (KSM EP)
2. English Debating Society (EDS)

f. Entrepreneurship

1. Student Voice
2. CEDS
3. Student Radio (RTC UI FM) 107,9

g. Others

1. Wira Makara (Student Regiment)
2. Students' Mountaineering Club (Mapala)

3.7. CAREER DEVELOPMENT CENTER (CDC)

Career Development Center is a center with the aim of preparing UI graduates to have more skill and higher level of competitiveness and at the same time channeled UI graduates to the working world. CDC is located in the Student Center Building.

Phone/Fax : +6221-70880577/78881021

Email : cdc-ui@ui.ac.id

FTUI also has a CDC, located at 3rd floor of Engineering Center (EC) Building.

Phone : +6221-78880766

3.8. NATIONAL STUDENT SCIENCE WEEK

The National Student Science Week (Pekan Ilmiah Mahasiswa Nasional - PIMNAS) is a prestigious event for all Universities in Indonesia organized by the Directorate General of Higher Education (DIKTI). The Adikarta Kertawidaya trophy is the award contested at the PIMNAS. PIMNAS is an opportunity to channel the creativity, education and community service of the society in a Student Activities Program. Below is some of the Student Activities Program being contested within the National Student Science Week.

Student Creativity Program - Research (PKM-P)

This program is a research program that aimed to identify the determinants of the quality of the product, find a causal relationship between two or more factors, experimented with a form or equipment, to establish the method of learning, conduct an inventory of resources, modifying existing products, identify the chemical compounds in the plants, testing the efficacy of plant extracts, formulate marketing techniques, a health survey of street children, teaching methods Balinese script in elementary school students, the rate of economic growth in the craft center of Kasongan, superstition factor that characterizes the behavior of the Javanese community and other activities that have such a purpose.

Student Creativity Program - Technology Application (PKM-T)

This program is a technology assistance program (quality of raw materials, prototypes, models, equipment or production processes, waste management, and quality assurance systems and many other) or other micro-or small-scale industries (home industries, small traders or cooperation) as needed by the potential partners in the program. PKMT require students to exchange ideas with

their partner in the program first, because the product is a solution of a problem which the PKMT partner prioritizes. Thus, in the proposed program, the student must attach a Statement of Willingness to Work Together with Partner on a paper with Rp. 6000, - seal.

Student Creativity Program - Entrepreneurship (PKM-K)

This program is the where students develop their skills in entrepreneurship and is a profit oriented program. Business commodities produced can be in the form of goods or services which in turn are one of the basic capital students will need in entrepreneurship and to enter the market.

Student Creativity Program - Community Service (PKM-M)

This program is an assistance program in science, technology, and arts in an effort to increase performance, build business skills, structuring and improving the environment, strengthening community institutions, the socialization of rational drug use, exposure to and understanding aspects of customary law, relief efforts on illiterates in the society and other community programs both for formal and non-formal societies.

Student Creativity Program - Writing Scientific Articles (PKM - AI)

This program is a program of writing a scientific article which originated from student activities in education, research, or community service which the student has done himself (case studies, field practice, community development work, student creativity program, internships, and many other).

Student Creativity Program - Written Concept (PKM - GT)

This program is a program of writing a scientific article that originated from ideas or concepts from a group of students. This written idea refers to an actual problem that can be found in the community and require a smart and realistic solution. In each area these programs are subdivided into seven groups of fields of science, namely:

1. Health field, including: Pharmacy, Nutrition, Obstetrics, Medicine, Dentistry, Nursing, Public Health, and Psychology.
2. Agricultural field, include: Veterinary Medicine, Forestry, Maritime, Fisheries, Agriculture, Animal Husbandry, and Agricultural Technology.
3. Mathematic and Natural Sciences field, including: Astronomy, Biology, Geography, Physics, Chemistry, and Mathematics.
4. Technology and Engineering field, including: Information Technology, Engineering, and Agricultural Technology.
5. Social Economy field, including: Agribusiness (Agriculture), Economic, Social and Political Sciences.
6. Humanities field, including: Religion, Language, Philosophy, Literature, and Art.
7. Education field, including: Education Sciences study program under the Faculty of Education.

Submission deadline for PKM-K, PKM-M, and PKM-P proposals are in October of each year, while deadline proposals for PKM-GT and PKM-AI are in March of each year. Almost all of these areas can be followed by students in 12 faculties at UI. PIMNAS is a means to prove the existence of UI as a research university in Indonesia. Win the Adikarta Kertawidya trophy and show the existence of UI as the Research Campus.

For further information :

<http://bem.ui.ac.id/>

<http://mahasiswa.ui.ac.id/info-pkm-2010.html>

3.9. SCHOLARSHIP

Universitas Indonesia currently manages approximately 71 scholarships both from the government and the private sector. Information about scholarships can be obtained at the Student Affairs Division of each faculty or through the website of the Directorate of Student Affairs at www.mahasiswa.ui.ac.id.



There are two types of scholarship in UI:

- UI Scholarship
- Donor/Sponsor Scholarship

General requirement procedure for scholarship application from Donor/Sponsor:

- Submit application through the Faculty Head with a recommendation from the Associate Dean of Student Affairs.
- Submit a photocopy of academic transcript stating a GPA corresponding with the requirement given by the donor/sponsor.
- Not a smoker.
- Is not a receiver of similar other scholarship.
- Other requirements as stated by the Donor/Sponsor.

LIST OF NAME OF SCHOLARSHIP DONOR/SPONSOR FOR UNIVERSITAS INDONESIA STUDENTS

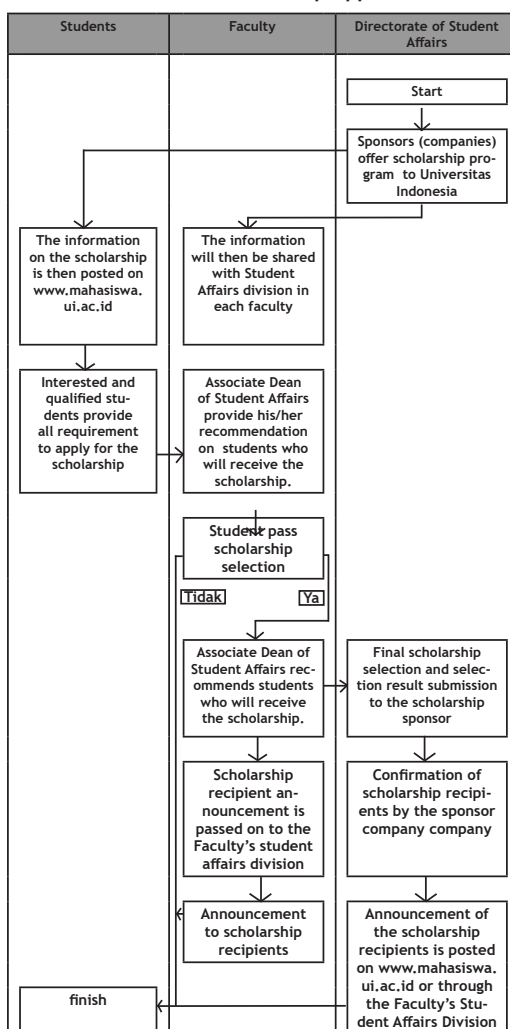
1. Bank BNI 46
2. Bank Central Asia
3. Bank Indonesia
4. Bank KEB Indonesia
5. Bank Lippo
6. Bank Mandiri
 - Bank Mandiri
 - Bank Mandiri Prestasi
7. Bank Mayapada
8. Bank Niaga
9. Bank Permata
10. Bank Tabungan Negara
11. Student Special Aid
 - Special Aid for Undergraduate Program Student
 - Special Aid for Vocational Program Student
12. BAZNAS
13. West Java Scholarship
14. BMU Scholarship
15. CIMB Niaga Excellent Scholarship
16. DKI Jakarta Scholarship
 - Jakarta Achievement Scholarship
 - Jakarta Thesis Scholarship
17. BPMIGAS
18. BRI
19. BUMN
20. DIKNAS
 - Diknas (Excellent Activist Scholarship)
 - Diknas (Excellent Master Scholarship)
 - Diknas (Super Excellent Scholarship)
21. Diknas 1 (BBM)
22. Diknas 2 (PPA)

23. Eka 2007 - 2008
24. Eka 2008 - 2009
25. Eka Cipta (Uang Buku)
26. Exxon MOBIL (For Students from Aceh)
27. Exxon MOBIL (For Students from Aceh)

Thesis

28. Indosat
29. Karya Salemba 4 (KS 4)
30. KORINDO
31. LGE
32. MARUBENI
33. MC.DERMONT
34. Part Time Job

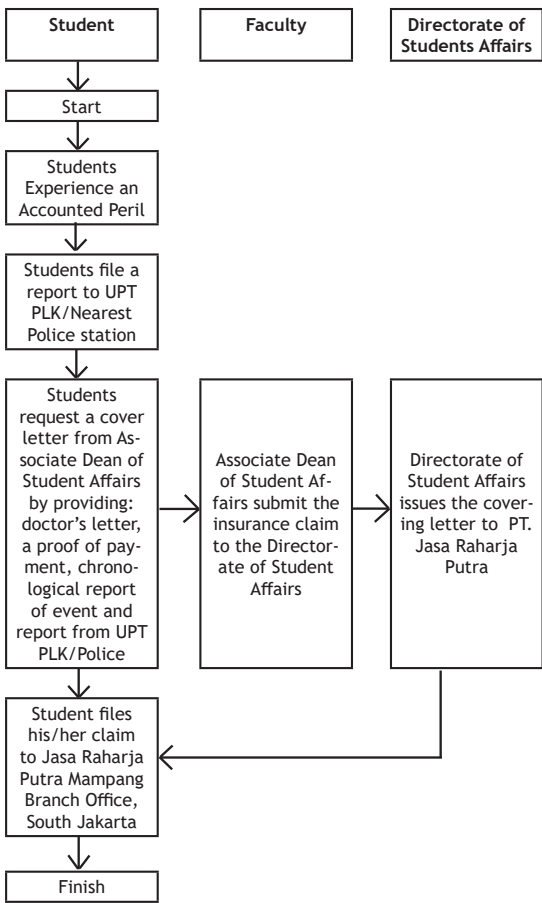
Flowchart of Scholarship Application



35. Posco (Thesis Aid)
36. PPA/BBM Angkatan 2009
 - PPA/BBM DIII
 - PPA/BBM S1
37. PPE
38. PT. BUMA Apparel Industry
39. PT. Coca Cola
40. PT. Indocement
41. PT. Accenture
42. PT. Sun Life Indonesia
43. PT. Thiess
44. Qatar Charity
45. Recapital
46. Rotary Club Jakarta Sudirman
47. Salim
48. Sariboga
49. Shell (Extention Scheme)
50. Shell (New Scheme)
51. Sime Darby
52. Sumitomo Bank (Supportive Scholarship)
53. Sumitomo Bank (Full Scholarship)
54. Sumitomo Corporation Scholarship
55. Supersemar
56. Tanoto
57. Tanoto S2
58. Total E & P
59. TPSDP (DIKTI)
60. UFJ Foundation / Mitsubishi
61. Unilever
62. Y. Asahi Glass (YAGI)
63. Y. Toyota (REGULER)
64. Yayasan IJARI
65. Yayasan Goodwill Internasional
66. YAYASAN TIFICO
67. YKPP - Pertamina
 - YKPP - Pertamina (Living Allowance)
 - YKPP - Pertamina (Tuition Fee)



Insurance Claims Process



Cause	Condition	Required Document
Train Accident	Injured	1. A notification letter from the Faculty's Associate Dean of Student Affairs to the Directorate of Students Affairs.
		2. Accident Report issued by the police
		3. Treatment report from the attending doctor
		4. Original receipt from the hospital or the attending physician
	Death	1. A notification letter from the Faculty's Associate Dean of Student Affairs to the Directorate of Students Affairs.
		2. Accident Report issued by the police
		3. Accident Report from Polsuska (PT. KAI)
		4. Autopsy report from the hospital
		5. Death Certificate
		6. A copy of the victim's birth certificate
		7. A copy of Family Card
		8. Heir certificate letter from the local district office.
Road Accident	Injured	1. A notification letter from the Faculty's Associate Dean of Student Affairs to the Directorate of Students Affairs.
		2. Accident Report issued by the police
		3. Treatment report from the attending doctor
		4. Original receipt from the hospital or the attending physician and the pharmacy
	Death	1. A notification letter from the Faculty's Associate Dean of Student Affairs to the Directorate of Students Affairs.
		2. Accident Report issued by the police
		3. Accident Report from Transportation Agency
		4. Autopsy report from the hospital
		5. Death Certificate
		6. A copy of the victim's birth certificate
		7. A copy of Family Card
		8. Heir certificate letter from the local district office.

3.10. INSURANCE

Each student enrolled in Universitas Indonesia for each running semester (participate in academic activities) will also be registered as an insurance member of PT. Asuransi Jasa Raharja.

For these insured students, they are allowed to submit an insurance claim in accordance with the following provisions:

- Accidents included within the insurance claim are accidents which occurred during the student's journey from home to UI campus to participate in academic and extracurricular activities whether it is within or outside of Campus area and with the UI/Faculty's Management's knowledge and permission.
- Compensation on claim regarding students' accident is only applicable to those who have paid the DKFM fee for the semester.
- In the event of an accident, student must report the accident no later than 3x24 hours to the office of the Universitas Indonesia Directorate of Student Affairs Sub Directorate of Student Welfare Services or the nearest PT Jasa Raharja Office Branch.
- If after 180 (one hundred and eighty) days, the accident is not reported, insurance compensation shall be canceled.
- Compensation claim (for victims suffering from injuries) must be submitted by attaching the original and valid receipt from doctor/hospital/clinic that treated the student's injuries.
- Non-medical care or treatment is not compensable.
- Students may send their inquiries regarding any matter that are not listed here directly to the Universitas Indonesia Head of Student Welfare Sub Directorate at the Central Administration Building, Universitas Indonesia Campus, Depok.

Compensation Receivable from the Insurance Claim *)

Death due to an accident :

Rp. 5.000.000, -

Permanent disability due to accident :

Rp. 10.000.000, -

Care / medical Treatment due to accident (maximum payment) :

Rp. 3.500.000, -

*) Subject about to change without notice

3.11. GENERAL INFORMATION

Post Office, Depok Campus

The Depok Campus Post Office offers postage stamp sales, special delivery mail delivery, registered mail, parcel post, money orders, checks and postal giro and savings services such as Batara. Address: Ground Floor Integrated Student Services Center (PPMT) Building, UI ,Depok Campus, 16424

Important Phone Numbers

UI Campus Salemba

Phone : +6221-330343, 3303455

Fax : +6221-330343

UI Campus Depok

Phone : +6221-7270020, 7270021, 7270022, 7270023, 7863460

Firefighters : 116

SAR : 55 021

Ambulance

RSCM : 118

Accidents : 119, 334 130

Police (on duty) : 525011

Police station

Central Jakarta : 3909922

North Jakarta : 491 017



South Jakarta : 7206011
 West Jakarta : 5482371
 East Jakarta : 8191478
 Depok : 7520014

3.12. INTERNATIONAL JOURNAL OF TECHNOLOGY

International Journal of Technology (IJTech) is bi-annual international referred journal with the objectives to explore, develop, and elucidate the knowledge of engineering design and technology, to keep practitioners and researchers informed on current issues and best practices, as well as serving as a platform for the exchange of ideas, knowledge, and expertise among technology researchers and practitioners.

International Journal of Technology provides an opportunity to share detailed insights from different understandings and practices associated with technology. It provides an international forum for cross-disciplinary exchange of insights and ideas regarding value and practices for dissemination. International Journal of Technology will publish your work to international society of practitioners and researchers with interest in technology design and development from a wide variety of sectors.

Website: www.ijtech.eng.ui.ac.id

3.13. QUALITY IN RESEARCH (QIR) CONFERENCE

QIR Conference is a bi-annual international conference organized by FTUI since 1998. The 13th QIR was held in Yogyakarta from 25 - 28 June 2013. It was attended by over 400 participants from 16 different countries in the world. This conference provide a chance for students, be it undergraduate, master or doctoral program students, to present their research findings in front of an international audience. The 14th QIR will be held in August 2015. For more detail information on Qir, please visit: <http://qir.eng.ui.ac.id>.

3.14. INTERNATIONAL OFFICE

International Office is the university division dedicated to support the internationalization goals of the university and to handle international mobility involving the university and the international civitas academica. Their goal is to assist the international students and scholars handle their academic-related matters at Universitas Indonesia and to bridge Universitas Indonesia's civitas academica with overseas universities. Universitas Indonesia has a worldwide cooperation with various universities all over the world. These cooperations include not only academic but also research collaborations, giving the international access and exposure to its entire proud member.

The International Office of Universitas Indonesia provides various services such as: Bilateral Cooperation (University to University Cooperation), Regional Cooperation (International Associations & International Forums), Government to Government Cooperation (G to G), International Learning and Teaching, Student Exchange, Double Degree, Sandwich Program, Visiting Scholars, Study abroad, Scholarship Opportunities, International Research and Research Training, International Knowledge Transfer; are some of the services provided by the International Office. These opportunities are open for all university members from lecturers to students, be it in their Bachelor, Master or Ph.D program. Students can benefit from these programs in experiencing a once in a life time chance to study and understand different academic cultures in the world.

For further information, please contact:
 Central Administration Building
 1st Floor, Universitas Indonesia
 Kampus Depok, Jawa Barat 16424
 Phone/fax : +62 21 - 7888 0139
 Email : intofui@yahoo.com, io-ui@ui.ac.id
 Milist : internationaloffice@yahoogroups.com
 Twitter : @intofui

The cover art features a large, dark blue triangular shape on the left side, which overlaps a grayscale photograph of a campus scene. The photograph shows several trees and a tall, thin, white monument or tower in the background. The foreground is a paved area with geometric patterns. The title 'UNDERGRADUATE PROGRAM' is centered in the upper half of the image, with the words on two lines, each underlined.

UNDERGRADUATE PROGRAM

4.8. UNDERGRADUATE PROGRAM IN ARCHITECTURE

Program Specification

1	Awarding Institution	Universitas Indonesia, for Double Degree Program : Universitas Indonesia and partner university	
2	Teaching Institution	Universitas Indonesia Double Degree: Universitas Indonesia and Partner Universities	
3	Program	Undergraduate Program in Architecture	
4	Class	Regular, Parallel, International	
5	Degree Offered	Sarjana Arsitektur (S.Ars) for Double Degree: Sarjana Arsitektur (S.Ars) and Bachelor of Architecture (B.Arch)	
6	Accreditation / Recognition	A Accredited from BAN-PT AUN-QA	
7	Language of Instruction	Bahasa Indonesia and English	
8	Study Scheme (Full time/Part time)	Full time	
9	Entry requirement	SMA Graduate/equal or D3/Polytechnic graduate	
10	Duration of Study	4 years / program	
	Semester	Total of semester	Weeks / Semester
	Regular	8	16-17
	Short (optional)	3	8
11	Graduates Profile: Sarjana Arsitektur is a graduate who has the ability to design architecture with respect to context and local needs and is based on the application of basic knowledge of architecture. Graduates are expected to have the ability as: <ul style="list-style-type: none"> • An Initiator- able to provide solutions to spatial problems critically and creatively with respect to local context and needs • A Designer - have the skill in assembling architectural elements and materials, have an understanding of built aspects, and have a sensibility in creating meaningful architectural design. • A Communicator - able to communicate ideas through words, writings, drawings, modeling and other media. • A Collaborator - able to work together with various stakeholders to propose creative solutions for real problems 		

12	Learning Outcome		
	<ol style="list-style-type: none"> 1. Able to create architectural design by integrating basic architectural knowledge, applying design and communication skills, applying ability for imagination, creative thinking, innovation and three-dimensional thinking. 2. Able to synthesize the knowledge of architectural history and theories, including knowledge on art, culture, and humanities that could influence the quality of architectural design. 3. Able to analyze context in which architecture is designed and integrate it through design that responds appropriately to the context. 4. Able to analyze the needs and characteristics of the users and integrate them as the basis to define contextual and functional requirements for different types of built environment. 5. Able to construct the knowledge of architectural design methods. 6. Able to construct the knowledge of structural systems, building materials and construction, and building utility. 7. Able to integrate the knowledge of natural and environmental systems into a sustainable architectural design. 8. Aware of various roles of architects in the society. 9. Able to gather information, formulate problems, perform analysis and synthesis that are related to architecture. 10. Able to apply mathematics, science, and basic engineering into the solution of complex technical problems. 11. Have integrity, able to demonstrate critical, creative, and innovative thinking, and have intellectual curiosity in solving the problems both at individual and group levels. 12. Able to offer alternative solutions towards various problems in the society, the community, and the nation. 13. Able to utilize information and communication technology. 14. Able to use verbal and written language in Bahasa Indonesia and English fluently in academic and non-academic activities. 15. Able to identify various innovative and independent entrepreneurial endeavors with respect to ethics. 		
13	Course Composition		
No	Type of Course	Credits	Percentage
i	University General Subjects	18	12,5%
ii	Basic Engineering Subjects	11	7,6%
iii	Architecture Core Subjects	87	60,4%
iv	Electives	28	19,5%
v	Total	144	100%
14	Total credits for graduation		144 Credit Semester Units

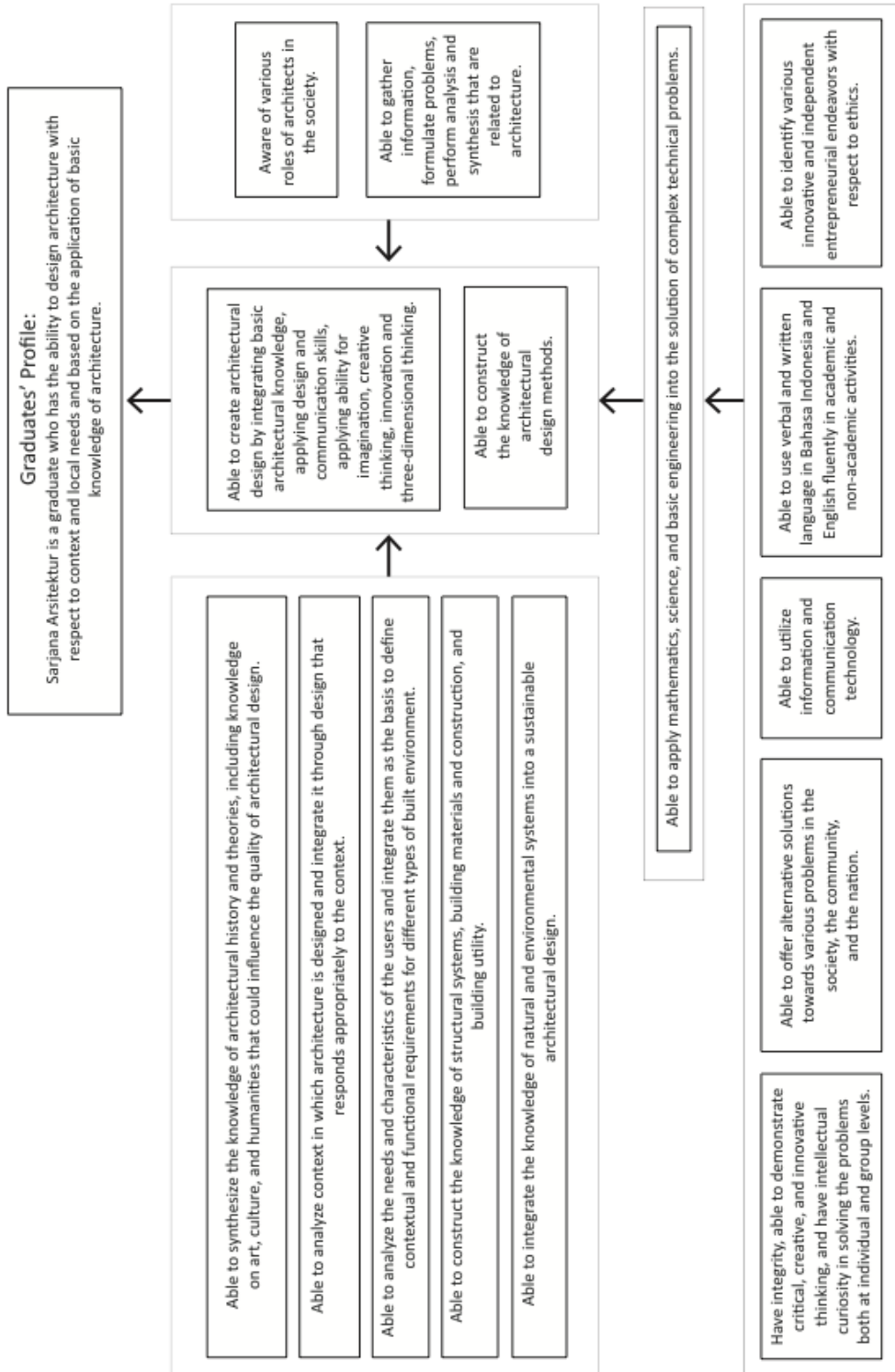
Job Opportunity

Graduates of Strata-1 Architecture Program UI hold a Sarjana Arsitektur with pre-professional qualifications. The graduate will be able/can may work as an intern in a professional practice or to continue on to a Professional Architectural Education Program (PPARS) (Architect). To obtain professional certification, a graduate has to perform an internship and pass the qualification assessment by the professional association (IAI/Indonesian Institute of Architects).

A graduate holding a Sarjana Arsitektur UI can work in various fields of the construction industry such as architecture, interior design or construction supervision. In addition to pursuing a career in the architectural field, graduates are able to develop a career as an assessor for project feasibility studies, building and environmental management, to work in the building materials industries as well as working in the public sector related to government buildings, construction and the built environment. In addition to these areas, graduates can also work in various fields of work that employ creative abilities and critical thinking skills.



Network Competencies



Curriculum Structure of Undergraduate Program in Architecture

	GENERAL AND BASIC ENGINEERING	BASIC	SKILL	ENRICHMENT	
8			UNDERGRADUATE THESIS/FINAL PROJECT (6)	ELECTIVE** (3) ELECTIVE (3) ELECTIVE* (2)	14 SKS
7			AD 5 (9)	ELECTIVE (3) ELECTIVE* (2)	14 SKS
6		INTRODUCTION TO URBAN CONTEXT (3)	AD 4 (9)	ELECTIVE (3) ELECTIVE (3)	18 SKS
5		BUILDING TECHNOLOGY 3 (3)	AD 3 (9)	ELECTIVE (3) ELECTIVE (3)	18 SKS
4		HISTORY AND THEORY OF ARCHITECTURE 2 (3)			
		BUILDING TECHNOLOGY 2 (3)	AD 2 (8)	ELECTIVE (3)	20 SKS
		DIGITAL DESIGN MEDIA (3)			
3	MECHANICS AND THERMAL PHYSICS (3) MECHANICS AND THERMAL PHYSICS LABORATORY (1)	HISTORY AND THEORY OF ARCHITECTURE 1 (3)			
		BUILDING TECHNOLOGY 1 (3)	AD 1 (7)		20 SKS
		DESIGN METHODS (3)			
2	INTEGRATED CHARACTER BUILDING A (6)				
	RELIGION (2)				
	SPORTS/ARTS (1)				
	LINEAR ALGEBRA (4)		BASIC DESIGN 2 (7)		20 SKS
1	INTEGRATED CHARACTER BUILDING B (6)				
	ENGLISH (3)	INTRODUCTION TO ARCHITECTURE (3)	BASIC DESIGN 1 (5)		20 SKS
	CALCULUS (3)				
TOTAL					144 SKS

NOTES: Student has taken or is taking

*) Should be taken outside Architecture Study Program

ARCHITECTURE



CURRICULUM STRUCTURE ARCHITECTURE

KODE	SUBJECT	CREDIT
CODE	1 st Semester	
UIGE600002	Integrated Character Building B	6
UIGE600003	English	3
ENGE600003	Calculus	3
ENAR601009	Introduction to Architecture	3
ENAR601001	Basic Design 1	5
	Sub Total	20
	2 nd Semester	
UIGE600001	Integrated Character Building A	6
UIGE600010 - 15	Religion	2
ENGE600004	Linear Algebra	4
UIGE600020 - 48	Sport / Art	1
ENAR602002	Basic Design 2	7
	Sub Total	20
	3 rd Semester	
ENGE600005	Physics (Mechanics and Thermal)	3
ENGE600006	Physics (Mechanics and Thermal) Lab	1
ENAR603003	Architectural Design 1	7
ENAR603010	History & Theory of Architecture 1	3
ENAR603011	Design Methods	3
ENAR603012	Building Technology 1	3
	Sub Total	20
	4 th Semester	
ENAR604004	Architectural Design 2	8
ENAR604013	History & Theory of Architecture 2	3
ENAR604014	Building Technology 2	3
ENAR604015	Digital Design Media	3
	Elective	3
	Sub Total	20
	5 th Semester	
ENAR605005	Architectural Design 3	9
ENAR605016	Building Technology 3	3
	Elective	3
	Elective	3
	Sub Total	18
	6 th Semester	
ENAR606006	Architectural Design 4	9
ENAR606017	Introduction to Urban Context	3
	Elective	3
	Elective	3
	Sub Total	18
	7 th Semester	
ENAR607007	Architectural Design 5	9
	Elective	3



	Elective*)	2
	Sub Total	14
8th Semester		
ENAR600008	Undergraduate Final Project	6
	Elective	3
	Elective**)	3
	Elective*)	2
	Sub Total	14
	Total	144

*) Mahasiswa wajib mengambil minimal 2 mata ajar di luar Program Studi S1 Arsitektur sebagai mata ajar pilihan.

**) Kajian Perancangan wajib diambil sebagai mata ajar pilihan bagi mahasiswa yang memilih Tugas Akhir

Resume

Wajib Universitas	18
Wajib Fakultas	11
Wajib Program Studi	87
Jumlah	116
Pilihan	28
Total Beban Studi	144

ELECTIVES

Code	Elective Course	Credit
ENAR600018	Acoustics	3
ENAR600019	Coastal Architecture	3
ENAR600020	Ethnic Achitecture	3
ENAR600021	Architecture, City and Power	3
ENAR600022	Heritage Architecture	3
ENAR600023	Urban Ecology	3
ENAR600024	Digital Fabrication	3
ENAR600025	High-Rise Building Facades	3
ENAR600026	Photography	3
ENAR600027	Geometry and Architecture	3
ENAR600028	Everyday and Architecture	3
ENAR600029	2D Design Dgital Communication	3
ENAR600030	3D Digital Design Communication	3
ENAR600031	Life Cycle Environment	3
ENAR600032	Project Management	3
ENAR600033	Principles of Urban Housing	3
ENAR600034	Interior Design	3

ENAR600035	Site Planning and Design	3
ENAR600036	City Planning	3
ENAR600037	Architectural Psychology	3
ENAR600038	Real Estate	3
ENAR600039	Project Feasibility Study	3
ENAR600040	Lighting Design	3
ENAR600041	Environ Design Theories and Methods	3
ENAR600042	Urban Housing Theory	3
ENAR600043	Building Utility	3
ENAR600044	Tectonic Workshop	3
ENAR600045	Independent Study	3
ENAR600046	Design Study **)	3
ENAR600047	Capita Selecta	3
ENAR600048	Internship	3
ENAR600049	Special Topic on Architectural Design	3
ENAR600050	Special Topic on Urban Design	3
ENAR600051	Special Topic on Urban Housing&Settlement	3
ENAR600052	Spec Topic Arch. History, Theory & Critics	3
ENAR600053	Special Topic on Building Technology	3

CURRICULUM STRUCTURE OF UNDERGRADUATE PROGRAM IN ARCHITECTURE INTERNATIONAL CLASS

KODE	SUBJECT	CREDIT
CODE	1 st Semester	
ENGE610005	Physics (Mechanics and Thermal)	3
ENGE610006	Physics (Mechanics and Thermal) Laboratory	1
UIGE610002	Academic Writing	3
ENGE610003	Calculus	3
ENAR611009	Introduction to Architecture	3
	Sub Total	18
	2 nd Semester	
ENGE610004	Linear Algebra	4
ENAR612002	Basic Design 2	7
ENAR612015	Digital Design Media	3
	Elective	3
	Sub Total	17
	3 rd Semester	
ENAR613003	Architectural Design 1	7
ENAR613010	History and Theory of Architecture 1	3
ENAR613011	Design Methods	3
ENAR613012	Building Technology 1	3
	Elective	3
	Sub Total	19



4 th Semester		
ENAR614004	Architectural Design 2	8
ENAR614013	History and Theory of Architecture 2	3
ENAR614014	Building Technology 2	3
	Elective	3
	Elective	3
	Sub Total	20
5 th Semester		
ENAR615005	Architectural Design 3	9
ENAR615016	Building Technology 3	3
UIGE610004	Integrated Character Building (Social-Humanities)	6
	Sub Total	18
6 th Semester		
ENAR616006	Architectural Design 4	9
ENAR616017	Introduction to Urban Context	3
UIGE610001	Integrated Character Building (Science, Technology, Health)	6
UIGE6100xx	Religion	2
	Sub Total	20
7 th Semester		
ENAR617007	Architectural Design 5	9
	Elective	3
	Elective	3
	Elective *)	2
	Sub Total	17
8 th Semester		
ENAR610008	Undergraduate Thesis/Final Project	6
UIGE610003	Sports/Arts	1
	Elective	3
	Elective **)	3
	Elective *)	2
	Sub Total	15
	Total	144

Resume

Wajib Universitas	18
Wajib Fakultas	11
Wajib Program Studi	87
Jumlah	116
Pilihan	28
Total Beban Studi	144

ELECTIVE COURSES

Kode	Elective Course Subject	Credit
ENAR610018	Acoustics	3
ENAR610020	Ethnic Achitecture	3
ENAR610022	Heritage Architecture	3
ENAR610054	Introducing Sustainability	3
ENAR610031	Life Cycle Environment	3
ENAR610040	Lighting Design	3
ENAR610026	Photography	3
ENAR610038	Real Estate	3
ENAR610035	Site Planning and Design	3
ENAR610029	2D Design Dgital Communication	3
ENAR610030	3D Digital Design Communication	3
ENAR610045	Independent Study	3
ENAR610046	Design Study **)	3
ENAR610047	Capita Selecta	3
ENAR610048	Internship	3
ENAR610049	Special Topic on Architectural Design	3
ENAR610050	Special Topic on Urban Design	3
ENAR610051	Special Topic on Urban Housing and Settlement	3
ENAR610052	Special Topic on Architectural History, Theory and Criticism	3
ENAR610053	Special Topic on Building Technology	3

*) Students are required to take minimum 2 subjects from outside Architecture Study Program as electives

**) Design Study is required as elective for students who choose to take Final Project

COURSE STRUCTURE AT CURTIN UNIVERSITY

Code	Course Title	Credits
Year 3-Semester 5 (July)		
COMS1010	Academic and Professional Communications	25
ARCH2022	Architectural Contexts Studio	25
ARCH2023	Architectural Contexts Methods	25
ARCH2004	Architecture and Identity	25
	Sub Total	100
Year 3-Semester 6 (February)		
ARCH3026	Architectural Discourse and Spatial Intelligence Studio	25
ARCH3027	Architectural Discourse and Spatial Intelligence Methods	25
ARCH3008	Urban Contexts	25
ARCH3006	Environmental and Technological Systems in Architecture 1	25



	Sub Total	100
Year 4-Semester 7 (July)		
ARCH3024	Architectural Design and Technical Integration Studio	25
ARCH3025	Architectural Design and Technical Integration Methods	25
ARCH3007	Environmental and Technological Systems in Architecture 2	25
ARCH3009	Architecture, Theory and Critique	25
	Sub Total	100
	Total Credits taken at Curtin University	300

COURSE STRUCTURE AT QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT)

February Entry		July Entry	
Code	Course Title	Code	Course Title
Semester 5 (February)		Semester 5 (July)	
DAB511	Architectural Design 5	DAB611	Architectural Design 6
DAH530	Integrated Technologies 2	DAH635	Architectural Technology 2
DAH525	Architecture and The City	DAB403	Visualisation 3
DAB325	Architecture in The 20th Century		Minor Unit/Elective
Semester 6 (July)		Semester 6 (February)	
DAB611	Architectural Design 6	DAB511	Architectural Design 5
DAH635	Architectural Technology 2	DAH530	Integrated Technologies 2
DAB403	Visualisation 3	DAH525	Architecture and The City
	Minor Unit/Elective	DAB325	Architecture in The 20th Century
Semester 7 (February)		Semester 7 (July)	
DAH710	Architectural Design 7	DAH811	Architectural Design 8 (triple)
DEH701	Research Methods		Minor Unit/Elective
	Minor Unit/Elective		
	Minor Unit/Elective		
Semester 8 (July)		Semester 8 (February)	
DAH811	Architectural Design 8 (triple)	DAH710	Architectural Design 7
	Minor Unit/Elective	DEH701	Research Methods
			Minor Unit/Elective
			Minor Unit/Elective
Total Credits (Year 3 & Year 4) taken at QUT = 192			

COURSE DESCRIPTION: COMPULSORY COURSES

ENAR601009

ENAR611009

INTRODUCTION TO ARCHITECTURE

3 CREDIT UNITS

Learning Objective:

Student should be able to understand basic principles in architecture, including basic theories, the relationship between architecture and human, architecture and nature, architecture and aesthetic, and architecture and technology; able to understand the position of architecture position among other disciplines.

Syllabus:

What is architecture? (Introduction: Architecture as discourse, career in architecture, *arkhe* + *tekton*; *tekhne*; Laugier primitive hut and the idea of shelter)

Aesthetic (proportion; rhythm; scale; golden rules; aesthetic trinity of classic Greek; Mandala and Maya; Taoism and nature, mathematical pattern in geometry)

Form and Space (Plato and form; type and how Quatremère de Quincy mimic nature; form and function; various views on space and the different meaning of *raum* and *spatium*)

Materiality and Materialization (re-investigating *tekhne*; the importance of understanding the characteristic and potential of material, tectonic which does not limit to construction)

Context (understanding of natural environment, artificial environment, and built environment; our existence and place according to Heidegger; material and context)

Human and relationship with others I (the importance of understanding human for designer; understanding of human being; body, senses and space; personal space according to Hall)

Human and relationship with others II (space, the presence and the remoteness of people, the meaning of place for human)

Architects as profession

Prerequisites: -

References:

1. James O'Gorman, ABC of Architecture, University of Pennsylvania Press, 1998
2. Marcus Vitruvius Pollio, Decem Libri de Architectura, BiblioBazaar, 2008
3. Adrian Forty, Words and Buildings: a Vocabulary of Modern Architecture, Thames and Hudson, 2004
4. Yusuf B. Mangunwijaya, Wastu Citra, Gramedia Pustaka Utama, 1988
5. Martin Heidegger, Building Dwelling Thinking, in Poetry, Language, Thought, HarperPerennial, 1975
6. M. Merleau-Ponty, Phenomenologie de la Perception Chapter II, Routledge & Kegan Paul Ltd, 1962
7. Edward T. Hall, The Hidden Dimension, Doubleday, 1966

ENAR601001

ENAR611001

BASIC DESIGN 1

5 CREDIT UNITS

Learning Objective:

Student should be able to produce 2D and 3D works as creative responses towards contexts by applying basic knowledge of visual art and design; Student should be able to acquire and apply basic 2D and 3D representational techniques.

Syllabus:

Basic knowledge of visual art and design, basic knowledge of aesthetic; basic knowledge of space; visual elements: shape, color, texture, etc; basic principles of composition; introduction to art history and its role in the making of art; basic drawing techniques: expression drawing; shape drawing (natural and manmade objects); basic modeling and assembling techniques; understanding



characteristics of media and materials; perceiving visually and communicating what is perceived; display and layout techniques.

Prerequisites: -

References:

1. Louis Fisher Rathus, *Understanding Art*, Prentice Hall, 1994
2. Claire Holt, *Art in Indonesia, Continuity and Changes*, Cornell University, Ithaca and London, 1967
3. Johannes Itten, *The Elements of Color*, John Wiley & Sons, 1970
4. Harvard Anarson, *History of Modern Art: Painting, Sculpture, Architecture & Photography*, Prentice Hall, 1998
5. Kimberly Elam, *Geometry of Design: Studies in Proportion and Composition*, Princeton, 1998
6. Gyorgy Kepes, *Structure in Art and in Science*, George Braziller, 1965
7. Frank D. K. Ching, *Architecture: Form, Space & Order*, John Wiley & Son, 1997
8. John Heskett. *Design: A Very Short Introduction*. Oxford: Oxford University Press, 2002.

ENAR602002

ENAR612002

BASIC DESIGN 2

7 CREDIT UNITS

Learning Objective:

Student should be able to produce spatial works as creative responses towards contexts by applying knowledge of visual art and design and employed various 2D and 3D representation techniques; Student should be able to communicate architectural ideas by using appropriate techniques and media.

Syllabus:

Basic knowledge of relationship among space, human and time; Exploration of visual elements, non-visual elements (audio, kinesthetic) and moving elements (kinetics); creating spatial ideas as response to contexts; principles of architectural communication, basic architectural communication techniques: projection drawing, orthographic drawing, perspective drawing; modeling and assembling techniques; model making; understanding characteristics of media and materials; communicating object and space for various purpose and audiences; communicate human activity space.

Prerequisites: Student has taken Basic Design 1 (or Visual Art in 2012 Curriculum)

References:

1. Francis D.K.Ching, *Drawing & Perceiving: A Visual Dictionary of Architecture*, John Wiley & Sons, 1996
2. Francis D.K.Ching, *Architectural Graphics, 2nd Ed*, John Wiley & Sons, 2002
3. Francis DK Ching, *Drawing: A Creative Process*, Wiley, 1989
4. Paul Laseau and Norman Crewe, *Visual Notes for Architects and Designers*, Wiley, 1986
5. Jeffrey Balmer, Michael T. Swisher, *Diagramming the Big Idea: Methods for Architectural Composition*, Routledge, 2012
6. Mark Basinger, *Drawing Ideas*, Random House, 2013
7. Don Norman, *The Design of Everyday Things*, Basic Books, 2013
8. Atelier Bow Wow, *Graphic Anatomy*, Toto, 2007
9. Joy Monice Malnar, *Sensory Design*, University of Minnesota Press, 2004
10. Peter Zumthor, *Atmospheres: Architectural Elements, Surrounding Objects*, Birkhauser, 2006

ENAR603010

ENAR613010

HISTORY AND THEORY OF ARCHITECTURE 1

3 CREDIT UNITS

Learning Objective:

Student should be able to understand the history of modern architecture from 1750s to present.



Syllabus:

This course is a survey of modern architecture history from 1750s to present, with main focus on the development of modern architecture. This course also discusses the relationship between the development of architecture and its socio-cultural, political, and technological contexts. This course also investigates principles in architecture and design. It emphasizes on several important moments in the development of modern architecture, and provide knowledge on the theories that are relevant to modern architecture.

Prerequisites: -

Reference:

1. Kenneth Frampton, *Modern Architecture: A Critical History 3rd Ed*, Thames & Hudson, 1997
2. Leonardo Benevolo, *History of Modern Architecture, Volume I & II*, MIT Press, 1979
3. Iain Borden, *Architecture and the Sites of History, Interpretations of Buildings and Cities*, Butterworth Architecture, 1995
4. William J.R. Curtis, *Modern Architecture since 1900, Third Edition*, Phaidon Press, 2002
5. Diane Ghirardo, *Architecture After Modernism*, Thames & Hudson, 1996
6. Spiro Kostof, *A History of Architecture, Settings & Rituals, 2nd Edition*, Oxford University Press, 1994
7. Bernd Evers & Christof Thoenes (eds.), *Architectural Theory: from the Renaissance to the Present*, Taschen, 2003

ENAR603011

ENAR613011

DESIGN METHODS

3 CREDIT UNITS

Learning Objective:

Student should be able to understand the basic thinking and methods of designing built environment; student should be able to explain the basic thinking and apply one of the design methods through writings and drawings.

Syllabus:

Theory and method of thinking; phenomenology, semiotic; theory and method of identifying problems; architectural observation, design knowledge, factual, deontic, instrumental, black box, clear box; theory and method of understanding problems, analysis and synthesis; Theory and methods of problem solving.

Prerequisites: Student has taken Introduction to Architecture

Reference:

1. Christopher Alexander, *Notes on The Synthesis of Form*, Harvard University Press, 1994
2. Don Koberg & Tim Bagnall, *The Universal Traveller: a Soft System Guide to Creativity, Problem Solving, & the Process of Reaching Goals*, Crisp Learning, 1991.
3. Gunawan Tjahjono, *Metode Perancangan: Suatu Pengantar untuk Arsitek dan Perancang*, 1998
4. Jean-Pierre Protzen & David J. Harris, *The Universe of Design: Horst Rittel's Theories of Design and Planning*, Routledge, 2010

ENAR604013

ENAR613013

HISTORY AND THEORY OF ARCHITECTURE 2

3 CREDIT UNITS

Learning Objective:

Student should be able to demonstrate knowledge of history of architecture in Indonesia from the end of 19th century to 20th century



Syllabus:

This course is a survey of history of architecture in Indonesia from the end of 19th century to 20th century. Various influences from overseas-India, China, Middle East and Western -take part in the development of architecture in Indonesia. Therefore it is important to understand Indonesian architecture and its relation with Non-Western and Western architecture, and architecture of various ethnic groups in Indonesia. Through discussion and analysis of buildings, drawings, photos and written materials, this course emphasizes on the interdependence among architecture, human, tropical climate, socio-culture background, politics and the development of technology in Indonesia.

Prerequisites: -

Reference:

1. Adolf Heuken SJ, *Tempat-Tempat Bersejarah di Jakarta*, Yayasan Cipta Loka Caraka, 1997
2. Helen Jessup, *Dutch Architectural Visions of the Indonesian Tradition*, Muqarnas v. 3, 1985, pp: 138-61.
3. Kemas Ridwan Kurniawan, *Postcolonial History of Architecture and Urbanism of Indonesian Tin Mining in Muntok Bangka*, VDM, 2011
4. Abidin Kusno, *Behind the Postcolonial: Architecture, Urban Space and Political Cultures in Indonesia*, Routledge, 2000
5. Scott Mirelles, *Historical Photographs of Batavia*
6. Rudolph Mrazek, *Engineers of Happy Land: Technology and Nationalism in a Colony*, Princeton University Press, 2002
7. Peter J.M Nas (ed.), *The past in the Present: Architecture in Indonesia*, NAI Publishers, 2006
8. Pauline Rosmaline, *Designing Colonial Cities: the Making of Modern Town Planning in the Dutch East Indies and Indonesia 1905-1950*, International Institute for Asian Studies the Newsletter 57, 2011
9. Iwan Sudradjat, *A Study of Indonesian Architectural History*, Ph.D Thesis at the Department of Architecture, University of Sydney, 1991
10. Yulianto Sumalyo, *Arsitek Kolonial Belanda dan Karya-karyanya*, Gama Press, 1992
11. Gunawan Tjahjono (ed), *The Indonesian Heritage Series*, Archipelago Press, 1998.
12. M. Nanda Widyarta, *Mencari Arsitektur Sebuah Bangsa; Sebuah Kisah Indonesia*, Wastu Laras Grafika, 2007
13. Yulia Nurliani Lukito, *Exhibiting Modernity and Indonesian Vernacular Architecture*, Springer VS, 2016

ENAR604015

ENAR614015

DIGITAL DESIGN MEDIA

3 CREDIT UNITS

Learning Objective:

Student should be able to express, explore, investigate and communicate architectural ideas by using digital media.

Syllabus:

Introduction to techniques and variety of digital media which can be applied to represent architectural ideas, investigate the basic abilities of various digital tools, choosing the appropriate digital tools and techniques to express, explore or investigate certain architectural ideas, studying the workflow of digital and analog media as a part of the architectural design process.

Prerequisites: Student has taken Basic Design 2 (or Architectural Communication Technique or Interior Architectural Communication Technique in 2012 Curriculum)

Reference:

1. L Farrelly, *Basic Architecture: Representation Techniques*. London, Thames&Hudson, 2008
2. B Kolarevic, (Ed), *Architecture in the Digital Age: Design and Manufacturing*, Spon Press, 2003
3. P Laseau, *Architectural Representation Handbook: Traditional and Digital Techniques for Graphic Communication*, McGraw-Hill Companies, 2000



ARCHITECTURAL DESIGN

Architectural design courses are the studio courses at the Department of Architecture. The studios denote learning locations as well as learning methods. At the end of studio-based learning process, students should be able to demonstrate their ability to think critically and creatively, which can be assessed from their ability to explain and present his/her design ideas. Architectural Design learning process is implemented through Design Projects, which are direct manifestations of integration of knowledge, consisting of:

- Factual knowledge: understanding and formulating design problems which are abstract, qualitative, and related to socio-cultural aspects of human/space activities
- The context and the environment of living space, ranging from micro/local/personal space, family, community, to urban/rural environment
- Technical aspects such as structure (statics), tectonics (including building materials), building physics, and building systems.
- Design methods
- Communication techniques

In practice, Design Projects accommodate learning materials from several courses: Architectural Design, Building Technology, and Introduction to Urban Context, within the following order:

- Design Project 1 integrates Architectural Design 1 and Building Technology 1
- Design Project 2 integrates Architectural Design 2 and Building Technology 2
- Design Project 3 integrates Architectural Design 3 and Building Technology 3
- Design Project 4 integrates Architectural Design 4 and Introduction to Urban Context

Gradual acquisition of knowledge and ability is structured within each stage of learning in Architectural Design in each semester.

DESIGN PROJECT 1

Design Project 1 focuses on the design of space for human self. Design Project 1 is an integration of knowledge on spatial design, based on the understanding of the relationship between human and space, basic structural logic, and basic principles of environmental comfort within spatial design. Design Project 1 consist of learning activities performed in two courses which complement each other, Architectural Design 1 and Building Technology 1.

ENAR603003

ENAR613003

ARCHITECTURAL DESIGN 1

7 CREDIT UNITS

Learning Objectives:

Student should be able to design a space for a single person, through understanding the relationship between human and space.

Syllabus:

Architectural Design 1 is an early and critical stage to introduce students to architecture through imaginative, creative, and innovative spatial design. Architectural knowledge encompasses basic comprehension about the personal spatial meaning and experience, interaction between human body and spatial quality, understanding of site and surrounding context as experienced by human body. Design activities consists of information gathering, formulation of design problem, analysis, and making critical decisions to formulate an active strategy toward human space, ability to think three-dimensionally through spatial design exploration, and communicating design ideas. Design exercises consist of: Designing a simple space for a single person that is materialized through 1:1 scaled model; Designing a space for an episode of human life.

Prerequisites:

Students have taken Basic Design 2 (or Architectural Communication Technique or Interior Architectural Communication Technique in 2012 Curriculum)
Students have taken or are taking Building Technology 1

References:



1. Bruno Zevi, *Architecture as Space: How to Look at Architecture*, 1993.
2. Donlyn Lyndon and Charles W. Moore, *Chambers For A Memory Palace*, MIT Press, 1994
3. Edward T. Hall, *The Hidden Dimension*, Peter Smith Publications, 1992
4. Francis DK Ching, *Architecture: Form, Space and Order*, Wiley, 1996.
5. Karen Franck & Bianca Lepori, *Architecture Inside Out*, Academy Press, 2000.
6. Michael Pollan, *A Place of My Own*. Penguin Press, 2008.
7. Steen Eiler Rasmussen, *Experiencing Architecture*, MIT Press, 1959.
8. Yi-Fu Tuan, *Space and Place: The Perspective of Experience*, University of Minnesota Press, 1981

ENAR603012

ENAR613012

BUILDING TECHNOLOGY 1

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand basic technical aspects of structure, material, construction, and building comfort; should be able to formulate technical design process and integration of structure and construction technologies into a functionally effective whole; should be able to produce a report of analysis and synthesis of all aspects of building technology.

Syllabus:

Structure in nature; Basic principle of structure and construction (logic of structure, basic mechanics); Site context (natural elements that influence building); Building material (material use and position in building, material property values that influence comfort); Basic building physics (building orientation, environmental influence to comfort); Introduction to basic structure and construction principles of simple building; Introduction to working drawing.

Prerequisites: -

References:

1. Mario Salvadori, *Why Building Stands Up*, W.W. Norton & Company, 2002
2. W. O. Kilmer, *Construction Drawings and Details for Interiors: Basic Skills*, John Wiley and Sons, 2003
3. Bjorn N Sandaker, Arne P Eggen, and Mark R Cruvellier, *The Structural Basis of Architecture: Second Edition*, Routledge, 2011
4. Forest Wilson, *Structure: The Essence of Architecture*, Van Nostrand Reinhold Company, 1971
5. Mark Dekay and G. Z. Sun Brown, *Wind & Light: Architectural Design Strategies: 3rd Edition*, John Wiley & Sons, 2014
6. Francis DK Ching, *Building Construction Illustrated*, Wiley, 2014
7. Edward Allen and Joseph Iano, *The Architect Studio Companion: Rules of Thumb for Preliminary Design*, Wiley and Sons, 2002
8. Ken Parsons, *Human Thermal Environments: The effects of Hot, Moderate, and Cold Environments on Human Health, Comfort, and Performance*, CRC, 2014
9. Pete Silver and Will McLean, *Introduction to Architectural Technology*. Laurence King, 2013

DESIGN PROJECT 2

Design Project 2 is about designing space for core social unit (family, a couple, etc). Design Project 2 integrates knowledge on spatial design based on the idea dwelling, the analysis of family life cycle and daily activities, application of basic structural principles and constructions of low rise building, building systems, and principle of building physics. Design Project 2 integrates the learning activities performed in two courses that complement each other, Architectural Design 2 and Building Technology 2.

ENAR604004



ENAR614004
ARCHITECTURAL DESIGN 2
8 CREDIT UNITS

Learning Objectives:

Students should be able to design a dwelling as a living space for core social unit through tectonic approach and by thorough consideration of the life cycle and daily activities of the core social unit.

Syllabus:

Architectural Design 2 proposes critical issues of human living space in urban community context, through the design of a dwelling. Design knowledge herewith includes the understanding concept of dwelling, observation and analysis of core social unit, formulating spatial program based on understanding of the needs of core social unit, development of spatial idea through tectonic exploration as *the art of joining* and exploration of spatial composition as an integration of *part-whole* that appropriately accommodate the programs, which are implemented into an integrated spatial design and communicated by complying with standard principles of architectural communication.

Prerequisites: -

Students have taken Architectural Design 1

Students have taken or are taking Building Technology 2

References:

1. Martin Heidegger, *Building Dwelling Thinking*, in *Poetry, Language, Thought*, HarperPerennial, 1975
2. Adam Sharr with Simon Unwin, *Heidegger's Hut*, in *ARQ (Architectural Research Quarterly) Vol.5 No.1*, 2001
3. J Macgregor Wise, *Home: Territory and Identity* pp. 391-396, in *INTIMUS Interior Design Theory Reader*, 2006
4. Norberg Schulz, *The Concept of Dwelling - Introduction*, Rizzoli International Publications, 1985
5. Hannah Arendt, *The Human Condition - Chapter I & II*, University of Chicago Press, 1958
6. A. Rapoport, *House Form and Culture - Chapter II Alternative Theories of House Form & Chapter III Socio-cultural Factors and House Form*, pp. 18-82, Prentice Hall Inc, 1969
7. Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction - Chapter I Introduction: Reflections on the Scope of the Tectonic*, MIT Press, 2001
8. Charles Moore, Gerrad Allen, Donlyn Lyndon, *Assembling A Room*, in *The Place of Houses*, University of California Press, 2000
9. Francis D. K. Ching, *Architecture: Form, Space and Order*, Wiley, 2014
10. Erik H. Erikson, *Life Cycle Completed - Chapter 3 Major Stages in Psychosocial Development*, W. W. Norton & Company, 1998
11. Jonathan Hill, *Immaterial Architecture - House and Home*, Routledge, 2006
12. Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects*, Birkhäuser Architecture, 2006

ENAR604014
ENAR614014
BUILDING TECHNOLOGY 2
3 CREDIT UNITS

Learning Objectives:

Students should be able to understand technical aspects of structure, material, construction, and building comfort for low rise building; should be able to formulate technical design process and integration of structure, construction technologies and building systems into a functionally effective whole; should be able to produce a report of analysis and synthesis of all aspects of building technology.

Syllabus:

Identification of all aspects of building technology in a simple low rise building that include: structural logic, buildability, and comfort; Introduction to in-depth knowledge on the materiality of material, construction techniques and details; Dimension and configuration of materials and their

relation to structure and construction of simple building; Elements of air conditioning and lighting in a building; Introduction to basic knowledge of building utility; Creating technical documents (working drawing).

Prerequisites: -

Students have taken Building Technology 1

Students have taken or are taking Architectural Design 2

References:

1. Francis DK Ching, *Building Construction Illustrated*, Wiley, 2014
2. Arthurs Lyons, *Materials for Architect & Builders*, Butterworth-Heinemann, 2008
3. Graham Bizley, *Architecture in Details*, Architectural Press, 2008
4. Andrea Deplazes, *Constructing Architecture: Materials Processes Structures, A Handbook*, Birkhauser, 2008
5. Gail Peter Borden, *Material The Typology of Modern Tectonics*, Wiley, 2010
6. Thomas Schropfer, *Material Design*, Birkhauser Architecture, 2010
7. Norbert Lechner, *Heating, Cooling, Lighting: The Sustainable Design Methods for Architect*, Wiley, 2013
8. Charlie Wing, *How Your House Works: a Visual Guide to Understanding and Maintaining Your Home, Updated and Expanded*, RSMean, 2012
9. Corky Binggeli, *CorkyBuilding Systems for Interior Designers*, John Wiley & Sons, 2003

DESIGN PROJECT 3

Design Project 3 is studio that focuses on aspects of buildability and building performances. Design Project 3 is an integration of design knowledge through technological approach, implementation of structural principles, construction and material, building supporting system and the use of technology in the design process. Design Project 3 integrates the learning activities performed in two courses that support each other, Architectural Design 3 and Building Technology 3.

ENAR605005

ENAR615005

ARCHITECTURAL DESIGN 3

9 CREDIT UNITS

Learning Objectives:

Students should be able to design a building based on the development of technological ideas.

Syllabus:

Architectural Design 3 proposes the critical issues on the aspects of buildability and building performance. Design knowledge includes the development of advanced tectonic ideas, encompassing exploration of material, detail and construction, and the development of architectural ideas based on building performance and system. Knowledge of site and environment includes the contextual explanation of design through the understanding of the site physical condition and consideration of sustainability. Knowledge on the role of technology in architectural design process in terms of representation, modeling and simulation.

Prerequisites:

Students have taken Architectural Design 2

Students have taken or are taking Building Technology 3

References:

1. Chris Abel, *Architecture, Technology and Process*, Architectural Press, 2004.
2. Ed van Hinte et al, *Smart Architecture*, 101 Publishers, 2003.
3. Robert Kronenburg & Filiz Klassen, *Theory, Context, Design and Technology - Transportable Environments 3*, Taylor & Francis, 2006.
4. Pete Silver and Will McLean, *Introduction to Architectural Technology*, Laurence King Publishing, 2013.
5. Bjorn Sandaker, *On Span and Space: Exploring Structures in Architecture*, Routledge, 2008



6. Branko Kolarevic and Ali Malkawi, *Performative Architecture: Beyond Instrumentality*, Spon Press, 2005

ENAR605016
ENAR615016
BUILDING TECHNOLOGY 3
3 CREDIT UNITS

Learning Objectives:

Students should be able to understand technical aspect of structure, material, construction, and building comfort for advanced building (high rise/wide span building); should be able to formulate technical design process and integration of structure, construction technology and utility system as a functionally effective whole; should be able to formulate utility system, transportation and communication system, building maintenance and safety; should be able to perform technical documentation and to create analysis/synthesis report from all aspect of building technology; should be able to understand energy conservation issues and ecological sustainability.

Syllabus:

Advanced building structure (wide span and/or high rise); Building system, advanced utility system (comfort, transportation, communication, maintenance, and building safety); Sustainable building energy conservation; Basic knowledge of ecological sustainability issues.

Prerequisites:

Students have taken Building Technology 2
 Students have taken or are taking Architectural Design 3

References:

1. Yonca Hurol, *The Tectonic sof Structural Systems: An Architectural Approach*, Routledge, 2015
2. D Schodek, *Structures, 7th Edition*, Prentice Hall, 2013
3. Chris Lefteri, *Materials for Design*, Laurance King Publishing, 2014
4. Bjarke Ingels, *Big, Hot To Cold: an Oddsey of Architectural Adaptation*, Taschen, 2015
5. Farshid Moussavi, *The Function of Form*, Harvard Graduate School of Design, 2009
6. William McDonough and Michael Braungart, *The Upcycle: Beyond Sustainability: Design for Abundance*, North Point Press, 2013
7. Rob Thompson, *Sustainable Materials, Processes and Production*, Thames and Hudson, 2013
8. Wolfgang Schueller, *Hghrise Building Structures*, John Wiley and Sons, 1977
9. Thomas Hootman, *Net Zero Energy Design: A Guide for Commercial Architecture*, Wiley, 2012
10. Pete Silver and Will McLean, *Structural Engineering for Architect: A Handbook*, Laurence King, 2014
11. Esther Rivas Adrover, *Deployable Structures*, Laurance King, 2015
12. Dwi Tangoro, *Utilitas Bangunan*, UI Press, 2004

DESIGN PROJECT 4

Design Project 4 focuses on the design of public space. It integrates architectural typology-based design method, issue-based design and basic knowledge of urban context. Design Project 4 integrates the learning activities performed in two courses that support each other, Architectural Design 4 and Introduction to Urban Context.

ENAR606006
ENAR616006
ARCHITECTURAL DESIGN 4
9 CREDIT UNITS

Learning Objectives:

Students should be able to design public space through architectural typology-based design approach, issue-based design approach and creative exploration of architectural form and spatial quality.

Syllabus:

Architectural Design 4 proposes the critical issues of human living space with socio-cultural complexities as found in urban/suburban context, through two approaches: a) top-down approach through the exploration of design ideas based on typology, and b) bottom-up approach through exploration of issue-based design ideas. Design knowledge herewith consist of the understanding of the concept of *public*, analysis of functional types, spatial programming, the concept of institution and how it is elaborated into spatial design, the formulation of initial statement based on issues, development of architectural programs and how they are elaborated into spatial design. Knowledge of site and environment includes the contextual explanation of the design through the understanding toward site physical condition, urban socio-cultural context, and consideration of sustainability. Design assignments consist of: Designing space within social environment context with a close kinship; Designing space in more complex urban environmental context.

Prerequisites:

Students have taken Architectural Design 3

Students have taken or are taking Introduction to Urban Context

References:

1. Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture*, Chapter 'Space', hal. 256-275, Thames & Hudson, 2000
2. Yi-Fu Tuan, *Space and Place: The Perspective of Experience*, University of Minnesota Press, 1981
3. Henri Lefebvre, *The Production of Space*, Blackwell, 1991
4. Jeremy Till, *Architecture Depends*, MIT Press, 2009
5. Karen Franck & Bianca Lepori, *Architecture Inside Out*, Academy Press, 2000
6. Giulio Carlo Argan, *On the Typology of Architecture*, in Nesbitt, *Theorizing a New Agenda for Architecture* hal. 240-246, Princeton Architectural Press, 1996
7. Jonathan D. Sime, *Creating Places or Designing Spaces*, Journal of Environmental Psychology, Vol 6, hal. 49-63, 1986
8. Andrew Ballantyne, *What is Architecture?*, Routledge, 2002
9. Aaron Betsky & Erik Adigard, *Architecture Must Burn: Manifestos for the Future of Architecture*, Gingko Press, 2001
10. Robert Venturi & Denise Brown, *Learning from Las Vegas*, MIT Press, 1977
11. Jane Jacobs, *The Death and Life of Great American Cities*, Random House, 1961
12. Bernard Tschumi, *Architecture and Limits I-III*, in Nesbitt, *Theorizing a New Agenda for Architecture* hal. 150-167, Princeton Architectural Press, 1996
13. Bauman Lyons Architects, *How to be a Happy Architect*, Black Dog Publishing, 2008

ENAR606017

ENAR616017

INTRODUCTION TO URBAN CONTEXT

3 CREDIT UNITS

Learning Objectives:

Student should be able to know and understand basic knowledge about physical urban forms, and able to implement and apply building rules and codes in design building in urban context.

Syllabus:

Basic principles and issues on urban physical forms: Cities, growth and development, urban physical form and urban physical development, planned and unplanned urban development, site planning and design.

Prerequisites:

Students have taken or are taking Architectural Design 4

References:

1. *Journal of the American Planning Association* (sesuai topik bahasan)
2. Jane Jacobs, *The Death and Life of Great American Cities*, Random House, 1961
3. Spiro Kostof, *The City Assembled: The Elements of Urban Form Through History*, Thames



- and Hudson, 1992
4. Richard T LeGates and Frederic Stout (eds.), *The City Reader*, Routledge, 2003
 5. Lewis Mumford, *The Urban Prospect*, Harvest Book, 1968

ENAR607007
ENAR617007
ARCHITECTURAL DESIGN 5
9 CREDIT UNITS

Learning Objective:

Students should be able to create architectural design based on particular design method; should be able to produce design ideas that demonstrate buildability and compliance to general building codes; should be able to demonstrate the application of advanced knowledge of structural principles, tectonic principles of construction detail and building utility system.

Syllabus:

Designing with particular approach or method within design units. Design units offered may include but not limited to: typology-based design; evidence-based design; architectural design as part of urban context; architectural design with technology, computation, or parametric approach. Knowledge and implementation of building codes that include safety, security, health, comfort, and accessibility. Design communication that comply with standard drawing convention. Awareness and understanding of role of various disciplines of design, construction, mechanical and electrical in architectural design process.

Prerequisites:

Students have taken Architectural Design 4

References:

1. Bryan Lawson, *How Designers Think*, Architectural Press, 2005.
2. Michael Hensel, *Performance-Oriented Architecture: Rethinking Architectural Design and the Built Environment*, Wiley, 2013.
3. Bernard Leupen, *Time-Based Architecture*, 101 Publishers, 2005.
4. Herman Hertzberger, *Space and the Architects*, 101 Publishers, 2000
5. Other reference relevance for Architectural Design.

ENAR600008
ENAR610008
UNDERGRADUATE THESIS
6 CREDIT UNITS

Learning Objectives:

Student should be able to identify, study and communicate issues within specific area of study related to architecture; able to develop basic skills in scientific reading, researching and writing; able to develop understanding of research as an activity that requires systematic and logical thinking; able to develop critical understanding of various architectural issues.

Syllabus:

The thesis begins with an inquiry into what the student wishes to study in depth. It involves the understanding of issues and explanation of the understanding with limited depth level. At this level, the student is neither required to solve a problem nor create or invent something new that would contribute to the discipline architecture. Simple investigation is performed through literature search and/or case studies. Originality. Modes of writing: descriptive, narrative, explanatory or argumentative.

Prerequisites: -

Students have earned 114 credit units and have taken Architectural Design 4

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006



2. David Evans & Paul Gruba, *How To Write A Better Thesis Dissertation*, Springer, 2014
3. F. Crews. *The Random House Handbook*, ed, pgs 10-114, McGraw-Hill Higher Education, 1992
4. I. Border and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005

ENAR600008
ENAR610008
FINAL PROJECT
6 CREDIT UNITS

Learning objectives:

Student should be able to identify, study and communicate issues within specific area of study related to architecture; able to develop basic skill in analyzing and synthesizing theory and demonstrate it through design; able to develop understanding of research as an activity that requires systematic and logical thinking; able to develop critical understanding of various architectural issues.

Syllabus:

The thesis begins with an inquiry into what the student wishes to study in depth. It involves the understanding of issues and explanation of the understanding with limited depth level, which is demonstrated through architectural design.

Prerequisites:

Students have earned 114 credit units and have taken Architectural Design 5

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
2. I. Border and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
3. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
4. Iain Border and Katarina Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. Murray Fraser, *Design Research in Architecture*, Ashgate Publishing, 2013

COURSE DESCRIPTION: ELECTIVE COURSES

ENAR600018
ENAR610018
ACOUSTICS
3 CREDIT UNITS

Learning Objectives:

Student should be able to understand basic principles of acoustic in space and environment; able to conduct analysis in order to create good acoustic design.

Syllabus:

Basic acoustics, characteristics of sounds, acoustic criteria in space, sound intensification and sound isolation, environmental noise.

Prerequisites: -

References:

1. Leslie L. Doelle & Lea Prasetyo, *Akustik Lingkungan*, Erlangga, 1993
2. PH Parkin & HR Humphreys, *Acoustics Noise and Buildings*, Faber and Faber Ltd, 1984
3. Finarya Legoh & Siti Hajarinto, *Buku Ajar AKUSTIK*, 2002

ENAR600019
COASTAL ARCHITECTURE



3 CREDIT UNITS

Learning Objectives:

Student should be able to understand the relationship between spatial temporal, cultural, and eco-anthropomorphic systems changes in coastal areas. Such understanding would contribute to awareness to integrate eco-anthroposystem ideas into architectural design in coastal areas; Student should be able to systematically express their own understanding and awareness of design issues in coastal context.

Syllabus:

Water and architecture, basic understanding and knowledge of coastal area, continental area, sea, archipelago, spatial-temporal-cultural aspects, coastal eco-anthroposystem, the effect of island-sea interactions to coastal living-livelihood, spatial planning, facilities and architecture of coastal areas, the dynamics of dwelling and dwelling form in Indonesian coastal areas, climate change and disaster risk in Indonesian coastal area, spatial-temporal-cultural changes and eco-anthroposystem in certain Indonesian coastal area, the role of architects in coastal spatial planning and the future of coastal architecture.

Prerequisites: -

References:

1. Abimanyu Takdir Alamsyah, *Regionisme dalam Penataan Permukiman di Gugus Pulau Mikro*, unpublished doctoral dissertation, PSIL Universitas Indonesia, 2006
2. Abimanyu Takdir Alamsyah, *Menata Permukiman Pulau-Laut, Mempertahankan Keberlanjutan Bertanahair Kepulauan*, Pidato pengukuhan Guru Besar Universitas Indonesia. Depok, 2009
3. Michael R. Bloomberg and Amanda M. Burden, *Urban Waterfront Adaptive Strategies in Waterfront Vision & Enhancement Strategy*, NYC Planning, 2013
4. Subandono Diposaptono and Budiman, *Tsunami*, Penerbit Buku Ilmiah Populer, 2006
5. Charles Moore and Jane Lidz, *Water + Architecture*, Thames and Hudson Ltd, 1994
1. Malcolm Newson, *Land, Water and Development: River Basin Systems and their Sustainable Development*, Routledge, 1992
2. Koen Olthuis and David Keuning, *Float!. Building on Water to Combat Urban Congestion and Climate Change*, Frame Publishers, 2010
3. Djoko Pramono, *Budaya Bahari*, Gramedia Pustaka Utama, 2005
4. Alan P. Trujillo and Harold V. Thurman, *Essentials of Oceanography, Ninth Edition*, Pearson Education Ltd, 2008
5. Heather Vies and Tom Spencer, *Coastal Problems: Geomorphology, Ecology and Society at the Coast*, Edward Arnold, 1995
6. Ary Wahyono, AR Patji, SS Laksono, R. Indrawasih, Sudiyono dan Surmiati Ali, *Hak Ulayat Laut di Kawasan Indonesia Timur*, Media Presindo Yogyakarta, 2000

ENAR600020

ENAR610020

ETHNIC ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Student should be able to understand various aspects of architecture which arise from ethnic groups' traditions in order to explain and analyse elements and principles of architecture from particular ethnic group; able to comprehend the phenomena of ethnic architecture in general and to analyze architecture tradition of particular ethnic group.

Syllabus:

Understanding of principles and elements of ethnic architecture, forming factors, symbolic classification, cosmological view and worldview, space, place, time, meaning, anthropomorphic, building process.

Prerequisites: -

References:

1. Amos Rapoport, *House Form and Culture*, Englewood Cliffs, 1960
2. N. Egender, *Architectural Anthropology*, Structura Mundi, 1996
3. John Hutchinson (ed.), Anthony D. Smith (ed.), *Ethnicity*, Oxford University Press, 1996
4. Roxanna Waterson, *The Living House: An Anthropology of Architecture in Southeast Asia*, Oxford University Press, 1990
5. Rodney Needham, *Symbolic Classification*, Scott Foresman Trade, 1979
6. J. Fox (ed.), *Inside Austronesian House*, The Australian National University, 1993
7. Bourdier & N. AlSayyad (eds), *Tradition, Dwellings and Settlements: Cross-cultural Perspectives*. University Press of America, 1989

ENAR600021

**ARCHITECTURE, CITY AND POWER
3 CREDIT UNITS**

Learning Objectives:

Student should be able to understand the role of architecture, planning and design within and between urban contexts; should be able to improve their understanding on the relationship between built environmental design and power; should be able to increase awareness of the intertwining relationship between architecture, social aspects, political aspects, economy, and culture; should be able to understand that built environment is conceived out of, and would yield particular power relation amongst the users in a specific context.

Syllabus:

The role of architecture and planning in the broader context. The relationship between design and power. Syllabus is prepared according to the themes related to the aforementioned relationship, which includes the following themes: Architecture and consumption, poverty and inequality; informality, disasters, theme parks/leisure, space of colonial/post-colonial/nation/globalization/neoliberalism; spatial enclaves/zone/segregation based on gender, race and ethnicity, social class, religion, spatial justice; housing and infrastructure.

Prerequisites: -

References:

1. Benedict Anderson, *Language and Power: Exploring Political Culture in Indonesia*, Ithaca: Cornell University Press, 1990 (esp. chapter "The Idea of Power in Javanese Culture")
2. James D Faubion, *Michel Foucault: Power, Essential Works of Foucault 1954-1984*, New York: The New Press, 1997
3. Kim Dovey, *Framing Spaces: Mediating Power in Built Form*, New York: Routledge, 1999
4. Lawrence Vale, *Architecture, Power and National Identity*, Routledge, 2002 (2nd ed)
5. Abidin Kusno, *Behind the Postcolonial: Architecture, Urban Space and Political Culture in Indonesia*, Routledge, 2000
6. Abidin Kusno, *After the New Order: Space, Politics and Jakarta*, University of Hawaii Press, 2013
7. Brenda S.A Yeoh, *Contesting Space in Colonial Singapore: Power Relations and the Urban Built Environment*, Singapore University Press, 2003
8. Nezar AlSayyad (ed), *Forms of Dominance: On the Architecture and Urbanism of Colonial Enterprise*, Avebury, 1992
9. Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism*, Chicago: The University of Chicago Press, 1991
10. David Harvey, *Spaces of Hope*, University of California Press, 2000
11. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, 1998
12. James Holston, *The Modernist City: an Anthropological Critique of Brasilia*, The University of Chicago Press, 1989
13. Janice E. Perlman, *Favela: Four Decades of Living on the Edge in Rio de Janeiro*, Oxford University Press, 2010
14. Mike Davis, *Evil Paradise: Dreamworlds of Neoliberalism*, The New Press, New York, 2007
15. Nezar AlSayyad & Ananya Roy, *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia*, New York: Lexington Book, 2004



16. Rafi Segal and Eval Weizman, *Civilian Occupation: the Politics of Israeli Architecture*, Babel and Verso, 2003
17. Teresa Caldeira, *City of Wall*, University of California Press, 2000
18. Don Mitchell, *The Right to the City: Social Justice and the Fight for Public Space*, The Guildford Press, 2003
19. Edward S. Popko, *Transition: A Photographic Documentation of a Squatter Settlement*, McGraw-Hill, 1978
20. Justin Mc Guirk, *Radical Cities: Across Latin America in Search of New Architecture*, London: Verso, 2014
21. David Harvey, *Rebel Cities: From The Right to The City to The Urban Revolution*, London: Verso, 2012
22. Marshall Berman, *All That is Solid Melt into Air: The Experience of Modernity*, New York: Penguin Books, 1982
23. Leopold Lambert, *Weaponized Architecture: The Impossibility of Innocence*, DPR-Barcelona, 2013
24. Andy Merrifield, *Metromarxism: A Marxist Tale of the City*, New York: Routledge, 2001
25. Nezar AlSayyad & Mejian Massoumi (eds), *Fundamentalist City? Religiosity and the Re-making of Urban Space*, London: Routledge, 2011
26. Edward W. Soja, *Seeking Spatial Justice*, University of Minnesota Press, 2010
27. Faranak Mirahtab & Neema Kudva (eds), *Cities of the Global South Reader*, Routledge, 2015
28. Etienne Turpin, et.al, *Jakarta: Architecture & Adaptation*, Jakarta: Universitas Indonesia Press, 2013 (esp. chapters Introduction and sections on interviews)
29. AbdouMalik Simone, *Jakarta Drawing the City Near*, University of Minnesota Press, 2014
30. and various movies related to themes and learning objectives

ENAR600022
HERITAGE BUILDING
3 CREDIT UNITS

Learning Objectives:

Student should be able to understand the definition and issues in heritage and conservation of architecture from the past, in particular heritage building and heritage site.

Syllabus:

Introduction to heritage architecture, including tangible and intangible aspects, Outstanding Universal Value from heritage building and heritage site. Discussion on critical issues related to heritage in architecture and city. Introduction to conservation strategies including data collection, documentation, planning, protection, development and reuse of heritage building and heritage site. Discussion on precedents of conservation in Indonesia.

Prerequisites: -

References:

1. Bernard M Feilden, *Conservation of Historic Building*, Butterworth-Heinemann Ltd, 1994
2. *Pengantar Panduan Konservasi Bangunan Bersejarah Masa Kolonial*, Pusat Dokumentasi Arsitektur dan Badan Pelestarian Pusaka Indonesia, 2011
3. Undang-undang Republik Indonesia Nomor 11 Tahun 2010 tentang Cagar Budaya
4. Peraturan Daerah Daerah Khusus Ibukota Jakarta Nomor 9 Tahun 1999 Tentang Pelestarian dan Pemanfaatan Lingkungan dan Bangunan Cagar Budaya
5. Amorim, Luiz et. Al. 'Preserving Space'. *Proceedings 6th International Space Syntax Symposium, Istanbul*, 2007 pp. 032-01 - 032-14.
6. Jean-Paul Corten et.al, *Heritage As An Asset for Inner-City Development: An Urban Manager's Guide Book*, Ammersfoort: Cultural Heritage Agency, nai010 Publishers, 2015
7. Fernando Diez, 'Heritage', dalam Cairns, Stephen, Crysler, Greig C., Heyne, Hilde. *The SAGE Handbook of Architectural Theory*. SAGE Publications, 2012, pp 274 - 86.
8. Peter J. Larkham, 'Conflict and Conservation' in *Conservation and the City*, Routledge, 1996, pp 3 - 30.
9. Adolf SJ Heuken, *Tempat-tempat Bersejarah di Jakarta*, Cipta Loka Caraka, 1997

ENAR600023
URBAN ECOLOGY
3 CREDIT UNITS

Learning Objectives:

Student should be able to understand principles of ecological architecture, architectural works which consider socio-cultural values, environmental sustainability, and holistic mode of thought in designing a building or an area.

Syllabus:

Ecological functions that are able to 'provides' for the primary needs of city inhabitants, including clean water, waste disposal management, air pollution, transportation, and green spaces.

Prerequisites: -

References:

1. Amos Rapoport, *Human Aspects of Urban Form: Towards a Man Environment Approach to Urban Form and Design*, Pergamon Press, 1997
2. Amos Rapoport, *The Meaning of The Built Environment: A Non Verbal Communication Approach*, Sage Publication, 1982
3. Graham Haughton et al, *Sustainable Cities*, Cromwell Press, 1994
4. Iftikar Ahmed, ed, *Beyond Rio: The Environmental Crisis and Sustainable Livelihoods in the third world*, MacMilan Press, 1995.
5. Moh. Soeryani, ed, *Lingkungan: Sumberdaya Alam dan Kependudukan dalam Pembangunan*, UI Press, 1987

ENAR600024
DIGITAL FABRICATION
3 CREDIT UNITS

Learning Objectives:

Student should be able to use digital fabrication equipment as a part of design process using various modeling approaches and tools.

Syllabus:

Introduction to fabrication process in architectural design, modeling technique, parametric approach.

Prerequisites:

Student have taken Design and Digital Media; Have basic skill in using architectural modeling software (Rhinceros, CAD, SketchUp)

References:

1. L. Iwamoto, *Digital Fabrication: Architectural and Material Techniques*, Princenton Architectural Press, 2009
2. B. Kolarevic ed, *Architecture in The Digital Age: Design and Manufacturing*. Spon Press, 2003
3. Mode Lab, n.d. *Foundations: Grasshopper Primer* Third Edition.
4. B. Peters and P. Terri, *Inside Smart Geometry: Expanding the Architectural Possibilities of Computational Design*, Wiley & Sons Ltd, 2013

ENAR600025
HIGH RISE BUILDING FAÇADE
3 CREDIT UNITS

Learning Objectives:

Student should be able to master the principles of high rise building façade including aesthetics, technical, and environmental aspects.

Syllabus:

The essence of building façade of high rise building (resistance to earth quakes, lateral force/wind and water resistance); Façade design; Material and technology for façade detailing; Green façade.

Prerequisites: -

References:

1. Wolfgang Schueller, *Struktur Bangunan Bertingkat Tinggi*, PT Eresco, 1989
2. Mario Camp, *Skycrapers: An Architectural Type of Modern Urbanism*, Birkhauser, 2000
3. Hart, Henn, and Sontag, *Multi-Storey Buildings in Steel*, Granada Publishing, 1978
4. *Details in Architecture*
5. The Images Publishing Group, *Creative Detailing by Some of The World's Leading Architects*, The Images Publishing Group Pty Ltd, 2004

ENAR600026

PHOTOGRAPHY

3 CREDIT UNITS

Learning Objectives:

Students are able to produce photography works with artistic elements and architectural photography communication through photographic process and photo-essays.

Syllabus:

Understanding visual communication principles through two-dimensional medium, lighting, principles of zone system, principles of visual graphics, exposure management, and photo image perfection.

Prerequisites: -

References:

1. Michael Freeman, *The Photographer's Eyes*, Focal Press, 2007
2. Michael Freeman, *Perfect Exposure*, Focal Press, 2009
3. Michael Freeman, *The Photographer's Story*, Focal Press, 2012
4. Graham Clarke, *The Photograph*, Oxford University Press, 1997
5. Marita Sturken & Lisa Carthwright, *Practice of Looking*. Oxford University Press, 2nd edition, 2009
6. Soeprapto Soedjono, *Pot-Poutri Fotografi*, Universitas Trisakti, 2007

ENAR600027

GEOMETRY AND ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Student should be able to understand the role of geometry as a basis of architectural form; should be able to explore various possible uses of geometry as the critical tools of analysis of existing architectural works and in the process of generating architectural design works.

Syllabus:

Development of knowledge on geometry and its implication for the development of architectural ideas and creativity; geometry and classical aesthetics of architecture; Euclidean and non Euclidean geometry in architecture; geometry and the concept of ideal city; geometry, music, and architecture; geometry and perception; topology in architecture; geometry in nature; exploration of the mechanism of geometry in shaping a design work and its potential for further development.

Prerequisites: -

References:

1. Vitruvius, *Ten Books on Architecture*, Dover Publications, 1960
2. Colin Rowe, *Mathematics of an Ideal Villa*, MIT Press, 1976



3. Peter Davidson & Donald L. Bates, *Architecture after Geometry*, Architectural Design, 1999
4. Irene Scalbert, Archis, *Towards a Formless Architecture: The House of the Future* by A+P Smithson, Archis, 1999
5. D'Arcy Thompson, *On Growth and Form*, Dover Publications, 1992
6. Jane Jacobs, *The Death and Life of Great American Cities*, RandomHouse, 1961
7. Elizabeth Martin, *Architecture as a Translation of Music in Pamphlet Architecture 16*, Princeton Architectural Press, 1994

ENAR600028
EVERYDAY AND ARCHITECTURE
3 CREDIT UNITS

Learning Objectives:

Student should be able to understand the existence of everyday phenomena as an approach to architecture; should be able to define the position of architecture discipline in responding to various phenomena of everyday living space.

Syllabus:

Understanding and historical background of the concept of the 'everyday' in architecture; domestic space; aesthetic in architecture and the 'everyday', the concept of an ideal city and its relation to the 'everyday'; cyber space and virtual space; the phenomenon of the 'everyday' in urban space: a participatory approach in architecture.

Prerequisites: -

References:

1. Steven Harris & Deborah Berke (eds.), *Architecture of the Everyday*, Princeton Architectural Press, 1997
2. Sarah Wigglesworth & Jeremy Till (eds.), *The Everyday and Architecture*, Architectural Design, 1998
3. Michel de Certeau, *The Practice of Everyday Life*, University of California Press, 1998
4. Malcolm Miles, *The Uses of Decoration: Essays in the Architectural Everyday*, Wiley, 2000
5. Arnstein, *Ladder of Citizen Participation*, 1969

ENAR600029
ENAR610029
2D DIGITAL DESIGN COMMUNICATION
3 CREDIT UNITS

Learning Objectives:

Student should be able to use 2D digital drawing media in architectural design process; should be able to choose and use various way and technique in drawing for particular purpose.

Syllabus:

Drawings in CAD and NURBS, pixel base drawing, vector base drawing, architectural representation and diagram.

Prerequisites:

Student have taken Basic Design 2 (or Architectural Communication Techniques or Interior Architectural Communication Techniques in 2012 Curriculum)

References:

1. L Farrelly, *Basic Architecture: Representation Techniques*, Thames&Hudson, 2008
2. B Kolarevic (Ed), *Architecture in the Digital Age: Design and Manufacturing*, Spon Press, 2003
3. P Laseau, *Architectural Representation Handbook: Traditional and Digital Techniques for Graphic Communication*, McGraw-Hill Companies, 2000



ENAR600030
ENAR610030
3D DIGITAL DESIGN COMMUNICATION
3 CREDIT UNITS

Learning Objectives:

Student should be able to use 2D digital modelling tool in architectural design process; should be able to choose and use various way and technique in digital modelling; should be able to create appropriate graphical representation for the model.

Syllabus:

Polygon and NURBS-based digital model, inter-platform exchange, from 2D representation to 3D model, rendering techniques.

Prerequisites:

Student have taken Basic Design 2 (or Architectural Communication Techniques or Interior Architectural Communication Techniques in 2012 Curriculum)

References:

1. Hamad M.M, *Autocad 2010 Essentials*, Jones and Bartlett, 2010
2. Robert McNeel & Associates, *Rhinoceros: NURBS Modelling for Windows*, USA, 1998
3. H Sondermann, *Photoshop in Architectural Graphics*, SpringerWienNewYork, 2009

ENAR600031
LIFE CYCLE ENVIRONMENT
3 CREDIT UNITS

Learning Objectives:

Student should be able to evaluate environmental feasibility for the users, based on their life cycles: birth, infancy, early childhood, childhood, adolescence, adulthood, old age, death, in terms of places and rites.

Syllabus:

Introduction, overview and definition to life-cycle environment in urban and rural/traditional environment; psychology of pregnant mother, birth environment, house, hospital, and maternity hospital, rites of birth, infant and his/her parent environment; sensory development of infant, psychological development of a child; playing environment and unwritten rules of playing, home environment, vicinity, and pre-school; parent and childcare; adolescence and rites, adolescence space; adult production space and marital rites; working environment; elderly; death space and rites.

Prerequisites: -

References:

1. Koentjaraningrat, *Ritus-Ritus Peralihan di Indonesia*, Balai Pustaka, 1979
2. A. Van Gennep, *The Rites of Passage*, (Terjemahan M. Viadon dan G), University of Chicago Press, 1960
3. Erik H Erickson, *Life Cycle Completed*, WW Norton & Company, 1997
4. Howard E. Gruber and J Jacques Voneche, *The Essential Piaget*, Gruber, NY: Basic Book, 1977
5. Saya S Shiraishi, *Young Heroes*, Cornell University Press, 1997.
6. Film: *Not One Less*, 1999; *Freedom Writers*, 2007; *The Human Body: The Incredible Journey from Birth to Death* (BBC, The Original BBC TV Series Plus: The Making of The Human Body), *Human Instinct* (BBC, The Complete Series)

ENAR600032
PROJECT MANAGEMENT
3 CREDIT UNITS

Learning Objectives:

Student should be able to develop knowledge about project management and process in design and built environment, particularly administration of technical aspects and building economy from early stage of the project, design, construction, to the end of the project; should be able to analyze the content of project management documents, building regulation and standard; should be able to create proposal, TOR, auction document, design administration, construction administration, or Project Manual of construction service in small scale project, including working with real client.

Syllabus:

As a product, project management is record of series of project activities as a holistic process, including as a working guide, coordination tools, and as a control for a project. As a process, project management is series of activities that produce responsibilities toward the quantity of records of the whole stages of project management, in one multidiscipline function. This subject introduces the skills required to manage project along its stages through chronological model.

Prerequisites: -**References:**

1. PMI, *A Guide to Project Management Body of Knowledge (PMBOK Guides)* 3 ed, Project Management Institute, 2004
2. J.M Amos and B.R Sarchet, *Management for Engineers*, Prentice-Hall Inc,
3. D Sbarrie, *Professional Construction Management*, McGraw-Hill, 1986
4. D Cadman and L Austin-Crowe, *Property Development*, EF & N Spon, 1978

ENAR600033**URBAN DESIGN PRINCIPLES****3 CRESIT UNITS****Learning Objectives:**

Student should be able to understand urban spatial design theory and its application into urban physical design; able to understand urban design method, inquiry, and design research, know various perspectives and approaches in urban design; able to understand basic principles of urban spatial design and able to interpret it into certain case of urban area..

Syllabus:

Principles of ordering system in two and three-dimension (vista, type, scale, precedent). Urban spatial condition and spaces between buildings, theory of urban spatial and urban typology, elements of urban design, conceptual exploration and basic research method through urban design enquiry and design research, environmental and spatial planning study. Component of urban design as control of process in forming the physical environment of urban space (land use, building intensity, setbacks, building coverage, building coefficient, building envelope, open green spaces, circulation, parking, infrastructure, conservation and visual/townscape corridor).

Prerequisites: -**References:**

1. Hamid Shirvani, *Urban Design Process*, Van Nostrand Reinhold Co, 1987
2. Ali Madanipour, *Design of Urban Space: an Inquiry into a Socio-Spatial Process*, John Wiley and Sons, 1996
3. Gideon S. Golany, *Ethics and Urban Design: Culture, Form and Environment*, Wiley, 1995
4. Matthew Carmona, et al, *Public Places - Urban Spaces*, Architectural Press, 2003
5. Ray Gindroz, *The Urban Design Handbook: Techniques and Working Methods*, W.W. Norton and Company, 2003
6. Geoffrey Broadbent, *Emerging Concepts in Urban Space Design*, Taylor and Francis, 1995
7. Congress for the New Urbanism, *Charter of the New Urbanism*, McGraw-Hill Professional, 1999
8. Allan B. Jacobs, *The Great Streets*, The MIT Press, 1995
9. Roger Trancik, *Finding Lost Space Theories of Urban Design*, Van Nostrand Reinhold Company, New York, 1986
10. Christopher Alexander, *The Oregon Experiment*, Oxford University Press, 1975
11. Yoshinobu Ashinara, *The Aesthetics Townscape*, MIT Press, 1984



12. Edmund Bacon, *Design of Cities*, Thames and Hudson, 1967.
13. Kevin Lynch, *The Image of The City*, MIT Press 1960
14. Kevin Lynch, *What is Time and Place*, MIT Press 1972

ENAR600034
INTERIOR DESIGN
3 CREDIT UNITS

Learning Objectives:

Student should be able to have knowledge about concept, principles, elements, and systems in interior space that support human comfort, safety, and well-being, with consideration of human factors in the design process.

Syllabus:

Principles and issues in interior design, elements of interior space, atmosphere and spatial perception, material and interior construction, spatial comfort factors, human factors and universal design, interior space typology.

Prerequisites: -

References:

1. Binggeli, Corky, *Building Systems for Interior Designer*, Wiley, 3rd edition, 2016
2. Caan, Sashi. *Rethinking Design and Interiors: Human Beings in the Built Environment*. Laurence King Publishing, 2011.
3. Dodsworth, Simon. *Fundamental of Interior Design*, Ava Publishing, 2009
4. Farrelly, Lorraine. *Construction+Materiality*. Ava Publishing, 2009
5. Leydecker, Sylvia. *Designing Interior Architecture: Concept, Typology, Material, Construction*. Basel. Birkhauser, 2013
6. Mesher, Lynne. *Basic Interior Design: Retail Design*. Ava Publishing, 2009

ENAR600035
ENAR610035
SITE PLANNING AND DESIGN
3 CREDIT UNITS

Learning Objectives:

Student should be able to implement basic principles of site and environmental planning in an integrated way..

Syllabus:

Principles and issues in site planning, mass orientation, natural site condition, role of outdoor elements, topographical study of site and environment, trees and vegetation, typology and analysis of site planning, site and environmental design method.

Prerequisites: -

References:

1. Joseph DeChiara & Lee L. Koppelman, *Standard Perancangan Tapak*, Penerbit Erlangga, 1994
2. Albert J. Rutledge, *Anatomy of a Park: The Essentials of Recreation Area Planning and Design*, ASLA, 1971
4. William A. Mann, *Landscape Architecture, An Illustrated History in Timeless, Site Plans and Biography*, 1993
5. Geoffrey & Susan Jellicoe, *The Landscape of Man, Shaping the Environment From Prehistory to the Present Day*, Thames and Hudson Ltd, 1995
6. Charles W. Moore et al, *The Poetics of Gardens*, MIT Press, 1993
7. Francis DK Ching, *Architecture: Form, Space and Order*, Erlangga, 1996



CITY PLANNING

3 CREDIT UNITS

Learning Objectives:

Student should be able to understand history and theory of urban planning through historical survey and/or through key themes; should be able to understand (1) how urban space works (based on historical context) based on spatial planning research; (2) key paradigms in urban planning thinking. This subject is arranged around principle that history of urban planning is a theory of urban planning that is bounded by planning ethics.

Syllabus:

Syllabus is arranged following a chronological order that is divided by 5 sections: (1) reflection towards design ideas, origin and design practice; industrial city and housing question; spatial order exploration; (2) Modernist City; Colonial and Post-Colonial experiments; (3) Sub-urban dream (legacy of American city planning); from ghetto to city role model (racial and ethnic control); (4) City and citizenship in different historical moments; spatial rules and arrangements (basic rules of design); urban crisis, urban management, and business city; building a world class city in global south; (5) compatible theories in design and justice; see design over neo-liberalism: paradigm occurs in planning.

As an alternative, syllabus could also interrupt this chronological order and arrange as a survey class that arrange these materials in key themes, such as: Empire; Colonial/Post-colonial; Modernity and Alternatives; Pacific Rim Capitalism Transnational Urbanism; Race/Ethnic, Planning and Real Estate; City and Village; Marginality; Re-building A City; Entrepreneur City; Dystopia Planning and Post-city.

Prerequisites: -

References:

1. Selected articles from *Journal of Planning Theory & Practices*; *Cities, Space & Polity*, *International Journal on Urban Regional Research*; *Journal of Planning Education and Research*; *Journal of Urban Studies*; *Journal of Urban Forum*; *Journal of Urban History*, *Environment and Urbanization*; *Antipode*; *Journal of Planning Literature*
2. Paul H. Gleye, "City Planning versus Urban Planning: Resolving Profession's Bifurcated Heritage," in *Journal of Planning Literature*, 2015, Vol 30(1), 3-17.
3. John Friedmann. *Planning in the Public Domain: From Knowledge to Action*, 1987
4. Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*, Blackwell Publishing, 2002 (3rd ed)
5. Friedrich Engels, *The Housing Question*, Lawrence and Wishart, Ltd, 1942
6. Mike Davis, *Planet of Slum*, Verso, 2007
7. Dolores Hayden, *Redesigning the American Dream: The Future of Housing, Work, and Family Life*, W.W Norton & Company, 2007 (2nd ed)
8. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning*, MIT Press, 1986
9. Kermit C Parsons & David Schuyler (eds), *From Garden City to Green City: The Legacy of Ebenezer Howard*, Baltimore: The John Hopkins University Press, 2002
10. The Congress for the New Urbanism. 2001. Charter.
11. Robert Caro, *The Power Broker: Robert Moses and the Fall of New York*, Vintage, 1975
12. Marshall Berman, *All That is Solid Melts into Air*, Penguin Book, 1988
13. James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, 1999
14. Nezar AlSayyad (ed), *Forms of Dominance: On the Architecture and Urbanism of the Colonial Enterprise*, Avebury, 1992
15. Lisa Peattie, *Planning: Rethinking Ciudad Guayana*, University of Michigan Press, 1987
16. James Holston, *The Modernist City: An Anthropological Critique of Brasilia*, University of Chicago Press, 1989
17. June Manning Thomas and Marsha Ritzdorf (eds), *Urban Planning and the African American Community: In the Shadows*, SAGE Publication, Inc, 1996
18. Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States*, Oxford University Press, 1987
19. St Clare Drake & Horace R. Cayton, *Black Metropolis: A Study of Negro Life in a Northern City*, University of Chicago Press, 1993.
20. Edward Banfield, *Unheavenly City Revisited*, Waveland Press, 1990



21. Susan S Fainstein & Scott Campbell, *Reading in Planning Theory*, Wiley-Blackwell, 2011
22. Lewis Mumford, *The City in History: Its Origin, Its Transformation and Its Prospects*, A Harvest/HBJ Books, 1961
23. Stephen Graham & Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition*, 2001
24. Aihwa Ong & Ananya Roy (eds), *Worlding Cities and the Art of Being Global*, Wiley-Blackwell, 2011
25. Patsy Haley, E.A Silva, et.al, “*Routledge Handbook on Planning Research Methods*” Routledge, 2015.
26. Faranak Mirahtab, *Cities in the Global South Reader*, Routledge, 2014.

ENAR600037

ARCHITECTURAL PSYCHOLOGY 3 CREDIT UNITS

Learning Objectives:

Student should be able to use basic conceptual knowledge of psychological process to identify and analysis human need in using built environment and outdoor space.

Syllabus:

Relationship between architecture and human behavior, motivation, needs, and value as basis of human actions, Gestalt perception, Ecological perception (Gibson), Affordances and its implementation in architecture, definition of cognition and its implementation in architecture, personal space, privacy, territoriality, crowding, post occupancy evaluation (POE).

Prerequisites: -

References:

1. Bell, Fischer and Greene, *Environmental Psychology*, Harcourt Publisher, 1996
2. Bryan Lawson, *The Language of Space*, Architectural Press, 2001
3. Byron Mikellides, *Architecture for People: Exploration in a New Humane Environment*, 1980
4. Wolfgang F.E. Preisser, Harvey Z. Rabinowitz, Edward T. White, *Post-Occupancy Evaluation*, Van Nostrad Reinhold, 1988
5. Dak Kopeck, *Environmental Psychology for Design*, Fairchild Books, 2012

ENAR600038

ENAR610038 REAL ESTATE 3 CREDIT UNITS

Learning Objectives:

Student should be able to demonstrate knowledge on real estate, and its relation to architecture and built environment.

Syllabus:

Definition of real estate, planning and development process of real estate (the eight phases of Real Estate Development Process), basic knowledge on property rental and sales project's cash-flow (short and long term project) and simple feasibility study.

Prerequisites: -

References:

1. Mike A. Miles, et.al, *Real Estate Development: Principles and Process*, Urban Land Institute, 2000
2. Carl Gunther, *Real Estate Fundamentals (Study Guide)*, 1995
3. Hartono Poerbo, *Tekno Ekonomi Bangunan Bertingkat Banyak*, Djambatan, 1993
4. Ralph Basile, et.al, *Downtown Development Handbook*, Urban Land Institute, 2000
5. Adrienne Schmitz, *Residential Development Handbook*, 3rd ed, Urban Land Institute, 2004
6. Dean Schwanke, *Mixed Used Development Handbook*, 2nd ed, Urban Land Institute, 2003



ENAR600039
PROJECT FEASIBILITY STUDY
3 CREDIT UNITS

Learning Objectives:

Student should be able to propose a project plan and explain the feasibility of a project, or program development in a clear, comprehensive and systematic manner.

Syllabus:

Basic knowledge which covers the requirement analysis, technical and environmental feasibility, time feasibility, socio-cultural aspects, legal feasibility, market and economic feasibility, exercise on issue formulation, SWOT analysis, scope, activities types and products, strategy, operational standard procedure, analyzing organizational plans, human resources and management, calculating market and economic possibility, as well as legal feasibility in relation to institutional consequences.

Prerequisites: -

References: -

ENAR600040
ENAR610040
LIGHTING DESIGN
3 CREDIT UNITS

Learning Objectives:

Student should be able to design lighting fixtures and ambience for interior and exterior uses, using artificial as well as natural lights through a critical, active collaborative learning process based on functional and aesthetical problems.

Syllabus:

Basic lighting, color, natural light, artificial light, light distribution, interior lighting, exterior lighting (façade of a house and high rise), urban lighting.

Prerequisites: -

References:

1. William M.C. Lam, *Perception and Lighting as Formgivers for Architecture*, McGraw-Hill, 1977
2. Norbert Lechner, *Heating Lighting Cooling*, 2nd edition, translated by PT RajaGrafindo Persada, 2007
3. John E Flynn, *Architectural Interior System*, Van Nostrand Reinhold Environmental Engineering Series, Van Nostrand Reinhold Company, 1971

ENAR600041
ENVIRONMENTAL DESIGN THEORIES AND METHODS

Learning Objectives:

Students should be able to understand basic theories and methods of environmental design, able to explain their own ideas and works, and apply one of various methods of designing built environment through writing and drawing (sketches).

Syllabus:

Theory and method of thinking: axiomatic and reductive; Theory and method of identifying built environment related problems, environmental observation and buildings that shape the environment, theory and methods of understanding problems of built environment; environmental analysis; theory and method of environmental design problem solving.

Prerequisites: -



References:

1. Gunawan Tjahjono, *Metode Perancangan: Suatu pengantar untuk arsitek dan perancang*, 1998
2. Christopher Alexander, *Notes on the Synthesis of Form*, Harvard University Press, 1994
3. Christopher Alexander, *Timeless Way of Buildings*, Oxford University Press, 1979

ENAR600042

URBAN HOUSING THEORY

3 CREDIT UNITS

Learning Objectives:

Student should be able to analyze the impact of housing, planning, and development in urban setting.

Syllabus:

Housing problems in an urban setting, studies on typology and housing area, methods and building typology, studies on economics and management of housing, studies on planning and design of urban housing.

Prerequisites: -

References:

1. Norma L. Newmark & Patricia J. Thompson, *Self, Space & Shelter: An Introduction to Housing*. New York: Harper and Row, Publisher, Inc., 1977
2. John F. C. Turner, *Housing By People: Towards Autonomy in Building Environments*, Marion Boyars Publishers Ltd, 1976
3. Graham Towers, *At Home in The City: An Introduction to Urban Housing Design*, 2005
4. Paul Balchin & Maureen Rhoden. *Housing: The Essential Foundations*, Routledge, New York 2003
5. Abidin Kusno, *Politik Ekonomi Perumahan Rakyat dan Utopia Jakarta*, 2012

ENAR600043

BUILDING UTILITY

3 CREDIT UNITS

Learning Objectives:

Student should be able to explain utility system in high-rise and wide span building that support the building to function well from the perspective of user safety and comfort.

Syllabus:

Clean, grey, and black water system, artificial ventilation system, artificial lighting system, audio system, CCTV, telephone, lightning rod, vertical transportation system, building cleaning system.

Prerequisites: -

References:

1. John S Reynolds and Benjamin Stein, *Mechanical and Electrical Equipement for Buildings*, John Willey and Sons, 1999
2. Ken Yeang, *The Skyscraper Bioclimatically Considered*, Academy Press, 1998
3. Esmond Reid, *Understanding Building*, MIT Press, 1984
4. Hartono Poerbo, *Utilitas Bangunan: Buku Pintar untuk Mahasiswa Arsitektur-Sipil*, Djam-batan, 1992

ENAR600044

TECTONIC WORKSHOP

3 CREDIT UNITS

Learning Objectives:



Students should be able to produce construction design based on tectonic knowledge and to realize the design by applying making skills.

Syllabus:

Design through material exploration approach; materiality of materials; construction, construction skills and techniques; detail and finishing.

Prerequisite: -

References:

1. Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, MIT Press, 2001
2. Richard Weston, *Material, Form and Architecture*, Yale University Press, 2003
3. Markus Heinsdorff, *Die Bambusbauten, The Bamboo Architecture, Design with Nature*, Design Media Publishing, 2013
4. Francis DK Ching, *Building Construction Illustrated*, Wiley, 2014

ENAR600045

ENAR610045

INDEPENDENT STUDY

3 CREDIT UNITS

Learning Objectives:

Students should be able to demonstrate advanced architectural knowledge on particular topic and to implement the knowledge into the development of ideas of architectural intervention.

Syllabus:

Advanced studies on architectural knowledge in particular context; development of architectural intervention ideas based on thorough inquiry of contexts and theoretical inquiry on related topic.

Prerequisite: -

References: Relevant references to the topic offered.

ENAR600046

ENAR610046

DESIGN STUDY

3 CREDIT UNITS

Learning Objectives:

Students should able to develop basic skills on reading, inquiry and writing a scientific writing related to design activities.

Syllabus:

Communicating design process through a writing that complies with scientific writing requirements; Communicating systematically literature review, development of design methods and design process through in writing.

Prerequisite: Student has passed Architectural Design 4 and is taking Final Project.

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
2. David Evans & Paul Gruba, *How To Write A Better Thesis Dissertation*, Springer, 2014
3. F. Crews. *The Random House Handbook*, ed, pgs 10-114, McGraw-Hill Higher Education, 1992
4. I. Borden and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005



**ENAR600047
ENAR610047
CAPITA SELECTA
3 CREDIT UNITS**

Learning Objective:

Students should be able to expand their knowledge on various topics that support acquisition of architectural knowledge and design skills.

Syllabus:

Selected topics that are relevant to architectural knowledge, design skills and their recent development.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR600048
ENAR610048
INTERNSHIP
3 CREDIT UNITS**

Learning Objectives:

Students should be able to understand the processes of planning, implementation and evaluation of engineering activities; to demonstrate knowledge on teamwork of relevant disciplines in professional practice; to demonstrate knowledge on the processes of planning, design and implementation of a built environment; to get involved as assistant designer/planner, assistant field project officer, assistant field supervisor, or community architect.

Syllabus:

Real project management process in a company, architecture consultant or organization. Techniques of writing simple proposal and reporting field work. Techniques of presentation, Method of managing material, data, equipment, human resources and coordination among stakeholders in engineering planning and implementation activities.

Prerequisite: -

References: -

**ENAR600049
ENAR610049
SPECIAL TOPIC ON ARCHITECTURAL DESIGN
3 CREDIT UNITS**

Learning Objectives:

Students should be able to demonstrate knowledge on current architectural discourse and its implementation in architectural design.

Syllabus:

Studies on the development of contemporary architectural theories; the development of architectural design methods; the development of architectural representation techniques; the development in other relevant disciplines that have impacts of the development of architectural design theories and methods.

Prerequisite: -

References: Relevant references to the topic offered.



**ENAR600050
ENAR610050
SPECIAL TOPIC IN URBAN DESIGN
3 SKS**

Learning Objectives:

Students should be able to demonstrate knowledge on current urban design discourse and its implementation in urban design.

Syllabus:

Studies on the development of urban design theories; the development of urban design methods; studies on current issues that are relevant to urban design; the development in other relevant disciplines that have impacts on the development of urban design theories and methods.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR600051
ENAR610051
SPECIAL TOPIC ON URBAN HOUSING AND SETTLEMENT
3 SKS**

Learning objectives:

Students should be able to demonstrate knowledge on current development of urban housing and settlement.

Silabus:

Studies on the development of urban housing and settlement theories; studies on current issues that are relevant to urban housing and settlement.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR600052
ENAR610052
SPECIAL TOPIC ON ARCHITECTURAL HISTORY, THEORY AND CRITICISM
3 SKS**

Learning Objectives:

Students should be able to demonstrate historical and theoretical knowledge on the development of architecture.

Syllabus:

Studies of architectural history throughout various periods of time; the development of discourse on architectural history and theory.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR600053
ENAR610053
SPECIAL TOPIC ON BUILDING TECHNOLOGY
3 SKS**

Learning Objectives:



Students should be able to demonstrate knowledge on current discourse on sustainability and its implementation on architectural design.

Syllabus:

Studies on the development of theories on building technology and sustainable environment; studies on relevant issues of sustainability; architectural design innovative practice related to sustainability; innovation on building structure, construction, material and systems.

Prerequisite: -

References: Relevant references to the topic offered.

4.9. UNDERGRADUATE PROGRAM IN INTERIOR ARCHITECTURE

Program Specification

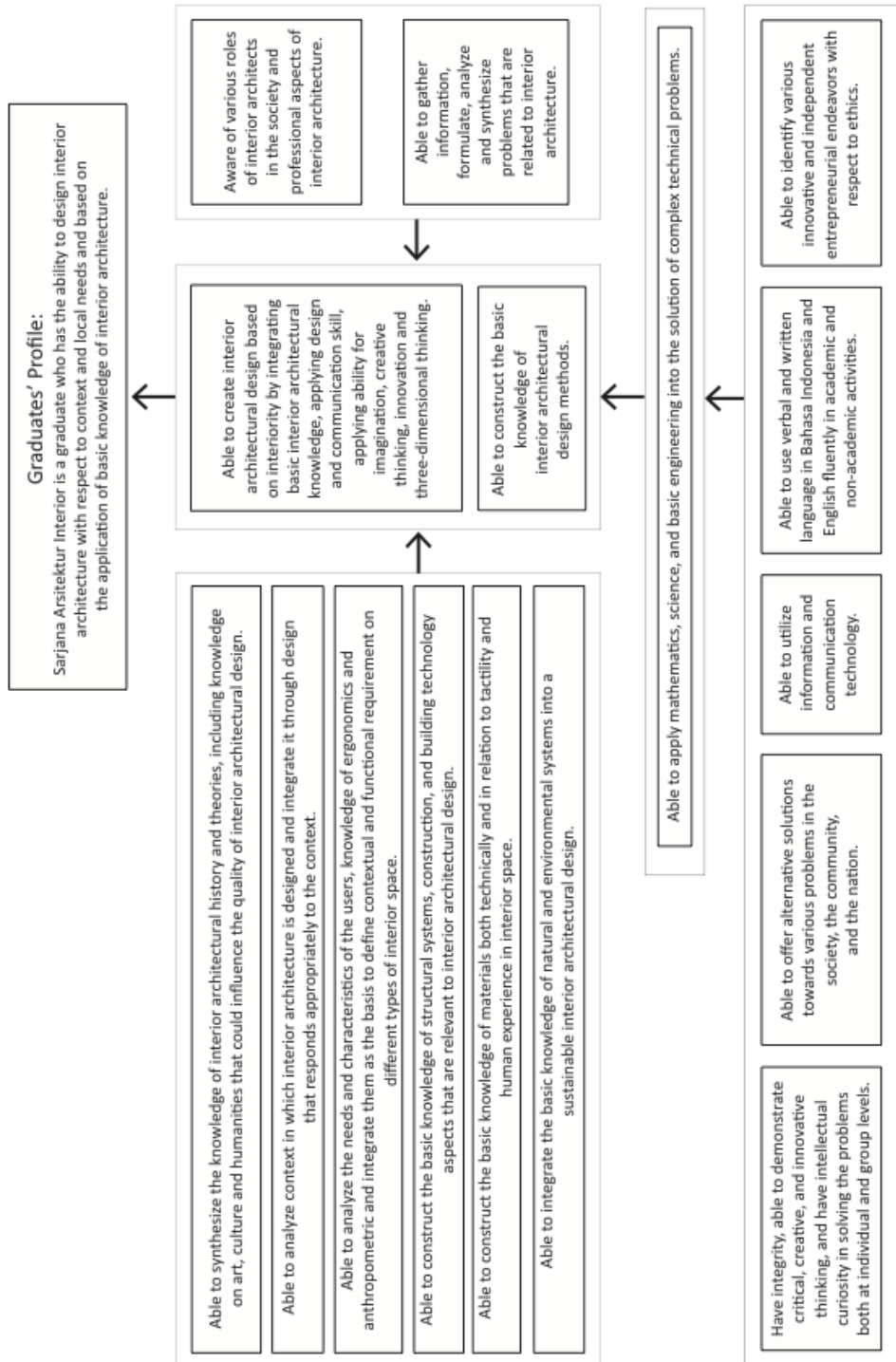
1	Awarding Institution		Universitas Indonesia
2	Teaching Institution		Universitas Indonesia
3	Program		Undergraduate Program in Interior Architecture
4	Class		Regular
5	Degree Offered		Sarjana Arsitektur (S.Ars)
6	Accreditation / Recognition		A Accredited from BAN-PT AUN-QA
7	Language of Instruction		Bahasa Indonesia and English
8	Study Scheme (Full time/Part time)		Full time
9	Entry Requirements		SMA Graduate/equal or D3/Polytechnique graduate
10	Duration of Study		4-year Program
	Semester	Total semester	Weeks / Semester
	Regular	8	17
	Short (optional)	3	8
11	<p>Graduates' Profile: Sarjana Arsitektur Interior is a graduate who has the ability to design interior architecture with respect to context and local needs and based on the application of basic knowledge of interior architecture.</p> <p>Graduates are expected to demonstrate the ability as:</p> <ul style="list-style-type: none"> • An Initiator- able to provide solutions to spatial problems critically and creatively with respect to local contexts and needs • A Designer - have the skill in assembling interior architectural elements and materials, have an • understanding of buildability aspects, and have a sensitivity in creating meaningful interior architectural design. • A Communicator - able to communicate ideas verbally and through writings, drawings, models and other media. • A Collaborator - able to work together with various stakeholders in the society to propose creative solutions for real problems 		
12	<p>Graduates' Competencies:</p> <ol style="list-style-type: none"> 1. Able to create interior architectural design based on interiority by integrating basic interior architectural knowledge, applying design and communication skill, applying ability for imagination, creative thinking, innovation and three-dimensional thinking. 2. Able to synthesize the knowledge of interior architectural history and theories, including knowledge on art, culture and humanities that could influence the quality of interior architectural design. 3. Able to analyze context in which interior architecture is designed and integrate it through design that responds appropriately to the context. 4. Able to analyze the needs and characteristics of the users, knowledge of ergonomics and anthropometric and integrate them as the basis to define contextual and functional requirement on different types of interior space. 5. Able to construct the basic knowledge of interior architectural design methods. 6. Able to construct the basic knowledge of structural systems, construction, and building technology aspects that are relevant to interior architectural design. 7. Able to construct the basic knowledge of materials both technically and in relation to tactility and human experience in interior space. 		

	<ol style="list-style-type: none"> 8. Able to integrate the basic knowledge of natural and environmental systems into a sustainable interior architectural design. 9. Aware of various roles of interior architects in the society and professional aspects of interior architecture. 10. Able to gather information, formulate, analyze and synthesize problems that are related to interior architecture. 11. Able to apply mathematics, science, and basic engineering into the solution of complex technical problems. 12. Have integrity, able to demonstrate critical, creative, and innovative thinking, and have intellectual curiosity in solving the problems both at individual and group levels. 13. Able to offer alternative solutions towards various problems in the society, the community, and the nation. 14. Able to utilize information and communication technology. 15. Able to use verbal and written language in Bahasa Indonesia and English fluently in academic and non-academic activities. 16. Able to identify various innovative and independent entrepreneurial endeavors with respect to ethics. 		
13	Course Composition		
No	Type of Course	Credits	Percentage
i	University General Subjects	18	12,5%
ii	Basic Engineering Subjects	11	7,6%
iii	Architecture Core Subjects	90	62,5%
iv	Electives	25	17,4%
	Total	144	100%
14	Total Credits for Graduation		144 SKS

Job Opportunity

A graduate is able to work as an interior architect in the design of interior spaces of residential buildings; commercial buildings; hospitals and other public buildings. S/he can also work as a design principal in an interior design consultancy, act as a corporate designer or a designer of movie, TV, theater sets as well as working as an academic and as a critic.

Network of Competencies



Curriculum Structure of Undergraduate Program in Interior Architecture

	GENERAL AND BASIC ENGINEERING	BASIC	SKILL	ENRICHMENT	
8			UNDERGRADUATE THESIS/FINAL PROJECT (6)	ELECTIVE** (3) ELECTIVE (3) ELECTIVE* (2)	14 SKS
7			IAD 5 (9)	ELECTIVE (3) ELECTIVE* (2)	14 SKS
6		FURNITURE: CONTEXT, RESPONSE, OBJECT (3)	IAD 4 (9)	ELECTIVE (3) ELECTIVE (3)	18 SKS
5		BUILDING TECHNOLOGY 3 (3)	IAD 3 (9)	ELECTIVE (3) ELECTIVE (3)	18 SKS
4		HISTORY AND THEORY OF INTERIOR ARCHITECTURE (3) ERGONOMICS (3) BUILDING TECHNOLOGY 2 (3) DIGITAL DESIGN MEDIA (3)	IAD 2 (8)		20 SKS
3	MECHANICS AND THERMAL PHYSICS (3) MECHANICS AND THERMAL PHYSICS LABORATORY (1)	HISTORY AND THEORY OF ARCHITECTURE (3) BUILDING TECHNOLOGY 1 (3) DESIGN METHODS (3)	IAD 1 (7)		20 SKS
2	INTEGRATED CHARACTER BUILDING A (6) RELIGION (2) SPORTS/ARTS (1) LINEAR ALGEBRA (4)		BASIC DESIGN 2 (7)		20 SKS
1	INTEGRATED CHARACTER BUILDING B (6) ENGLISH (3) CALCULUS (3)	INTRODUCTION TO ARCHITECTURE (3)	BASIC DESIGN 1 (5)		20 SKS
TOTAL					144 SKS

NOTES: ----- Student has taken or is taking

*) Should be taken outside Interior Architecture Study Program



CURRICULUM STRUCTURE UNDERGRADUATE INTERIOR ARCHITECTURE

KODE	SUBJECT	CREDIT
CODE	1 st Semester	
UIGE600002	Integrated Character Building B	6
UIGE600003	English	3
ENGE600003	Calculus	3
ENAR601009	Introduction to Architecture	3
ENAI601001	Basic Design 1	5
	Sub Total	20
	2 nd Semester	
UIGE600001	Integrated Character Building A	6
ENGE6000xx	Religion	2
ENGE600004	Linear Algebra	4
ENGE6000xx	Sport / Art	1
ENAI602002	Basic Design 2	7
	Sub Total	20
	3 rd Semester	
ENGE600005	Physics (Mechanics and Thermal)	3
ENGE600006	Physics (Mechanics and Thermal) Lab	1
ENAI603003	Interior Architectural Design 1	7
ENAR603010	History & Theory of Architecture 1	3
ENAR603011	Design Methods	3
ENAI603012	Building Technology 1	3
	Sub Total	20
	4 th Semester	
ENAI604004	Interior Architectural Design 2	8
ENAR604013	History & Theory of Interior Arch	3
ENAI604014	Building Technology 2	3
ENAR604015	Digital Design Media	3
ENAI604016	Ergonomics	3
	Sub Total	20
	5 th Semester	
ENAI605005	Interior Architectural Design 3	9
ENAI605017	Building Technology 3	3
	Elective	3
	Elective	3
	Sub Total	18
ENAI606006	Interior Architectural Design 4	9
ENAI606018	Furniture: Context, Response, Object	3
	Elective	3
	Elective	3
	Sub Total	18
	7 th Semester	
ENAI607007	Interior Architectural Design 5	9



	Elective	3
	Elective*)	2
	Sub Total	14
8th Semester		
ENAI600008	Undergraduate Final Project	6
	Elective	3
	Elective**)	3
	Elective*)	2
	Sub Total	14
	Total	144

ELECTIVES

Kode	Elective Course	Credit
ENAI600019	Acoustics	3
ENAI600020	Anatomy of Space	3
ENAI600021	Art Appreciation	3
ENAI600022	Furniture Design	3
ENAR600026	Photography	3
ENAI600023	Life Style & Interior Architecture	3
ENAR600029	2D Design Dgital Communication	3
ENAR600030	3D Digital Design Communication	3
ENAI600024	Matriality in Interior Architecture	3
ENAI600025	Spatial Object	3
ENAR600037	Architectural Psychology	3
ENAI600026	Exhibition Space and Narrative	3
ENAI600027	Art and Architecture	3
ENAI600028	Lighting Design for Interior Arch	3
ENAI600029	Independent Study	3
ENAI600030	Design Study**)	3
ENAI600031	Capita Selecta	3
ENAI600032	Internship	3
ENAI600033	Special Topic on Interior Architecture	3

*) Students are required to take minimum 2 subjects from outside Interior Architecture Study Program as electives

**) Design Study is required as elective for students who choose to take Final Project



COURSE DESCRIPTION: COMPULSORY COURSES**ENAR601009****ENAR611009****INTRODUCTION TO ARCHITECTURE****3 CREDIT UNITS****Learning Objective:**

Student should be able to understand basic principles in architecture, including basic theories, the relationship between architecture and human, architecture and nature, architecture and aesthetic, and architecture and technology; able to understand the position of architecture position among other disciplines.

Syllabus:

What is architecture? (Introduction: Architecture as discourse, career in architecture, *arkhe* + *tekton*; *tekhne*; Laugier primitive hut and the idea of shelter)

Aesthetic (proportion; rhythm; scale; golden rules; aesthetic trinity of classic Greek; Mandala and Maya; Taoism and nature, mathematical pattern in geometry)

Form and Space (Plato and form; type and how Quatremère de Quincy mimic nature; form and function; various views on space and the different meaning of *raum* and *spatium*)

Materiality and Materialization (re-investigating *tekhne*; the importance of understanding the characteristic and potential of material, tectonic which does not limit to construction)

Context (understanding of natural environment, artificial environment, and built environment; our existence and place according to Heidegger; material and context)

Human and relationship with others I (the importance of understanding human for designer; understanding of human being; body, senses and space; personal space according to Hall)

Human and relationship with others II (space, the presence and the remoteness of people, the meaning of place for human)

Architects as profession

Prerequisites: -**References:**

1. James O’Gorman, ABC of Architecture, University of Pennsylvania Press, 1998
2. Marcus Vitruvius Pollio, Decem Libri de Architectura, BiblioBazaar, 2008
3. Adrian Forty, Words and Buildings: a Vocabulary of Modern Architecture, Thames and Hudson, 2004
4. Yusuf B. Manguwijaya, Wastu Citra, Gramedia Pustaka Utama, 1988
5. Martin Heidegger, Building Dwelling Thinking, in Poetry, Language, Thought, HarperPerennial, 1975
6. M. Merleau-Ponty, Phenomenologie de la Perception Chapter II, Routledge & Kegan Paul Ltd, 1962
7. Edward T. Hall, The Hidden Dimension, Doubleday, 1966

ENAI601001**BASIC DESIGN 1****5 CREDIT UNITS****Learning Objective:**

Student should be able to produce 2D and 3D works as creative responses towards contexts by applying basic knowledge of visual art and design; Student should be able to acquire and apply basic 2D and 3D representational techniques.

Syllabus:

Basic knowledge of visual art and design, basic knowledge of aesthetic; basic knowledge of space; visual elements: shape, color, texture, etc; basic principles of composition; introduction to art history and its role in the making of art; basic drawing techniques: expression drawing; shape drawing (natural and manmade objects); basic modeling and assembling techniques; understanding characteristics of media and materials; perceiving visually and communicating what is perceived; display and layout techniques.

Prerequisites: -

References:

1. Louis Fisher Rathus, *Understanding Art*, Prentice Hall, 1994
2. Claire Holt, *Art in Indonesia, Continuity and Changes*, Cornell University, Ithaca and London, 1967
3. Johannes Itten, *The Elements of Color*, John Wiley & Sons, 1970
4. Harvard Anarson, *History of Modern Art: Painting, Sculpture, Architecture & Photography*, Prentice Hall, 1998
5. Kimberly Elam, *Geometry of Design: Studies in Proportion and Composition*, Princeton, 1998
6. Gyorgy Kepes, *Structure in Art and in Science*, George Braziller, 1965
7. Frank D. K. Ching, *Architecture: Form, Space & Order*, John Wiley & Son, 1997
8. John Heskett. *Design: A Very Short Introduction*. Oxford: Oxford University Press, 2002.

ENAI602002

BASIC DESIGN 2

7 CREDIT UNITS

Learning Objective:

Student should be able to produce spatial works as creative responses towards contexts by applying knowledge of visual art and design and employed various 2D and 3D representation techniques; Student should be able to communicate architectural ideas by using appropriate techniques and media.

Syllabus:

Basic knowledge of relationship among space, human and time; Exploration of visual elements, non-visual elements (audio, kinesthetic) and moving elements (kinetics); creating spatial ideas as response to contexts; principles of architectural communication, basic architectural communication techniques: projection drawing, orthographic drawing, perspective drawing; modeling and assembling techniques; model making; understanding characteristics of media and materials; communicating object and space for various purpose and audiences; communicate human activity space.

Prerequisites: Student has taken Basic Design 1 (or Visual Arts in 2012 Curriculum)

References:

1. Francis D.K.Ching, *Drawing & Perceiving: A Visual Dictionary of Architecture*, John Wiley & Sons, 1996
2. Francis D.K.Ching, *Architectural Graphics, 2nd Ed*, John Wiley & Sons, 2002
3. Francis DK Ching, *Drawing: A Creative Process*, Wiley, 1989
4. Paul Laseau and Norman Crewe, *Visual Notes for Architects and Designers*, Wiley, 1986
5. Jeffrey Balmer, Michael T. Swisher, *Diagramming the Big Idea: Methods for Architectural Composition*, Routledge, 2012
6. Mark Basinger, *Drawing Ideas*, Random House, 2013
7. Don Norman, *The Design of Everyday Things*, Basic Books, 2013
8. Atelier Bow Wow, *Graphic Anatomy*, Toto, 2007
9. Joy Monice Malnar, *Sensory Design*, University of Minnesota Press, 2004
10. Peter Zumthor, *Atmospheres: Architectural Elements, Surrounding Objects*, Birkhauser, 2006



ENAR603010
HISTORY AND THEORY OF ARCHITECTURE 1
3 CREDIT UNITS

Learning Objective:

Student should be able to understand the history of modern architecture from 1750s to present.

Syllabus:

This course is a survey of modern architecture history from 1750s to present, with main focus on the development of modern architecture. This course also discusses the relationship between the development of architecture and its socio-cultural, political, and technological contexts. This course also investigates principles in architecture and design. It emphasizes on several important moments in the development of modern architecture, and provide knowledge on the theories that are relevant to modern architecture.

Prerequisites: -

Reference:

1. Kenneth Frampton, *Modern Architecture: A Critical History 3rd Ed*, Thames & Hudson, 1997
2. Leonardo Benevolo, *History of Modern Architecture, Volume I & II*, MIT Press, 1979
3. Iain Borden, *Architecture and the Sites of History, Interpretations of Buildings and Cities*, Butterworth Architecture, 1995
4. William J.R. Curtis, *Modern Architecture since 1900, Third Edition*, Phaidon Press, 2002
5. Diane Ghirardo, *Architecture After Modernism*, Thames & Hudson, 1996
6. Spiro Kostof, *A History of Architecture, Settings & Rituals, 2nd Edition*, Oxford University Press, 1994
7. Bernd Evers & Christof Thoenes (eds.), *Architectural Theory: from the Renaissance to the Present*, Taschen, 2003

ENAR603011
DESIGN METHODS
3 CREDIT UNITS

Learning Objective:

Student should be able to understand the basic thinking and methods of designing built environment; student should be able to explain the basic thinking and apply one of the design methods through writings and drawings.

Syllabus:

Theory and method of thinking; phenomenology, semiotic; theory and method of identifying problems; architectural observation, design knowledge, factual, deontic, instrumental, black box, clear box; theory and method of understanding problems, analysis and synthesis; Theory and methods of problem solving.

Prerequisites: Student has taken Introduction to Architecture

Reference:

1. Christoper Alexander, *Notes on The Synthesis of Form*, Harvard University Press, 1994
2. Don Koberg & Tim Bagnall, *The Universal Traveller: a Soft System Guide to Creativity, Problem Solving, & the Process of Reaching Goals*, Crisp Learning, 1991.
3. Gunawan Tjahjono, *Metode Perancangan: Suatu Pengantar untuk Arsitek dan Perancang*, 1998
4. Jean-Pierre Protzen & David J. Harris, *The Universe of Design: Horst Rittel's Theories of Design and Planning*, Routledge, 2010



ENAI604013
HISTORY AND THEORY OF INTERIOR ARCHITECTURE
3 CREDIT UNITS

Learning Objectives:

Students should be able to have an understanding architecture history and its relation to interior design history and art history, and also theories that are evolved in the development of interior architecture.

Syllabus:

Interior and interiority; relationship between body and space; types in interior architecture; sign and society; design in society; semiotics in design; critical regionalism; locality issue in design, development of interior representation.

Prerequisites: -

References:

1. Shashi Caan Being, *Rethinking Design and Interiors: Human Beings in the Built Environment*, Laurence King Publishing, 2011.
2. Christine McCarthy, *Toward a Definition of Interiority*, in *Space and Culture*, Vol. 8, 2005, pp. 112-125
3. Mark Kingwell, Mark Taylor and Julieanna Preston, *Tables, Chairs, and Other Machines for Thinking*, in *Intimus*, by Mark Taylor and Julieanna Preston (eds.), Wiley-Academy, 2006, pp. 173-179
4. Gaston Bachelard, *The Dialectics of Outside and Inside*, in *Intimus*, by Mark Taylor and Julieanna Preston (eds.), Wiley-Academy, 2006, pp. 22-25
5. Ed Hollis, *The Secret Lives of Buildings: From the Ruins of the Parthenon to the Vegas Strip in Thirteen Stories*, Picador, 2010
6. Michel Foucault, *Discipline and Punish: The Birth of The Prison (Chapter on Disciplining the Docile Bodies)* 2nd ed, Vintage Books, 1995
7. Neil Leach (ed), *Rethinking Architecture: A Reader in Cultural Theory (Articles by Umberto Eco and Roland Barthes)*, Routledge, 1997
8. Jean Baudrillard, *System of Objects*, Verso Books, 2006
9. Evans, Robin "The Developed Surface: An Enquiry into the Brief Life of an Eighteenth Century Drawing Technique", in *Translations from Drawing to Building and Other Essays*, London: Architectural Association, 1997):195-231.

ENAI604016
ERGONOMICS
3 CREDIT UNITS

Learning Objectives:

Students should be able to understand and apply the basic concept of ergonomics and human factors and anthropometry in interior design as well universal design.

Syllabus:

Basic principles of ergonomics and human factors; basic principles of anthropometry; application of ergonomics and human factors in the design of built environment; basic principles of universal design.]

Prerequisites: -

References:

1. Mark S Sanders and Ernest J. McCormick. *Human Factors in Engineering and Design*, McGraw Hill, Singapore, 1992
2. Galen Cranz, *The Chair: Rethinking Culture, Body and Design*, W & W Norton Company, 2000
3. R. S. Bridger, *Introduction to Ergonomics*, Routledge-Taylor & Francis, London, 2003

4. Pheasant, Stephan. *Bodyspace: Anthropometry, Ergonomics and the Design of Work*. Taylor & Francis, London, 2003
5. H. E. Kroemer, Ann D. Kroemer, *Office Ergonomics*, Taylor & Francis, London, 2001
6. Edward Steinfeld, Jordana L. Maisel, *Universal Design*, Wiley, New Jersey, 2012

ENAR604015

DIGITAL DESIGN MEDIA

3 CREDIT UNITS

Learning Objective:

Student should be able to express, explore, investigate and communicate architectural ideas by using digital media.

Syllabus:

Introduction to techniques and variety of digital media which can be applied to represent architectural ideas, investigate the basic abilities of various digital tools, choosing the appropriate digital tools and techniques to express, explore or investigate certain architectural ideas, studying the workflow of digital and analog media as a part of the architectural design process.

Prerequisites: Student has taken Basic Design 2 (or Architectural Communication Technique or Interior Architectural Communication Technique in 2012 Curriculum)

References:

1. L Farrelly, *Basic Architecture: Representation Techniques*. London, Thames & Hudson, 2008
2. B Kolarevic, (Ed), *Architecture in the Digital Age: Design and Manufacturing*, Spon Press, 2003
3. P Laseau, *Architectural Representation Handbook: Traditional and Digital Techniques for Graphic Communication*, McGraw-Hill Companies, 2000

INTERIOR ARCHITECTURAL DESIGN

Interior architectural design courses are the studio courses at the Department of Architecture. The studios denote learning locations as well as learning methods. At the end of studio-based learning process, students should be able to demonstrate their ability to think critically and creatively, which can be assessed from their ability to explain and present his/her design ideas. Interior Architectural Design learning process is implemented through Design Projects, which are direct manifestations of integration of knowledge, consisting of:

- Factual knowledge: understanding and formulating design problems which are abstract, qualitative, and related to socio-cultural aspects of human/space activities
- The context and the environment of interior living space, ranging from micro/local/personal space, family, community, to urban/rural environment
- Technical aspects such as structure, tectonics (including building materials), building physics, building systems, and building utilities that are relevant to the interior design.
- Design methods
- Communication techniques

In practice, Design Projects accommodate learning materials from several courses: Interior Architectural Design, Building Technology, and Furniture: Context, Response and Object, within the following order:

- Design Project 1 integrates Interior Architectural Design 1 and Building Technology 1
- Design Project 2 integrates Interior Architectural Design 2 and Building Technology 2
- Design Project 3 integrates Interior Architectural Design 3 and Building Technology 3
- Design Project 4 integrates Interior Architectural Design 4 and Furniture: Context, Response, Object



Gradual acquisition of knowledge and ability is structured within each stage of learning in Architectural Design in each semester.

DESIGN PROJECT 1

Design Project 1 focuses on the design of space for human self. Design Project 1 is an integration of knowledge on spatial design, based on the understanding of the relationship between human and space, basic structural logic, and basic principles of environmental comfort within spatial design. Design Project 1 consist of learning activities performed in two courses which complement each other, Interior Architectural Design 1 and Building Technology 1.

ENAI603003

INTERIOR ARCHITECTURAL DESIGN 1

7 CREDIT UNITS

Learning Objectives:

Student should be able to design a space for a single person, through understanding the relationship between human and space.

Syllabus:

Interior Architectural Design 1 is an early and critical stage to introduce students to architecture through imaginative, creative, and innovative spatial design. Architectural knowledge encompasses basic comprehension about the personal spatial meaning and experience, interaction between human body and spatial quality, understanding of site and surrounding context as experienced by human body. Design activities consists of information gathering, formulation of design problem, analysis, and making critical decisions to formulate an active strategy toward human space, ability to think three-dimensionally through spatial design exploration, and communicating design ideas. Design exercises consist of: Designing a simple space for a single person that is materialized through 1:1 scaled model; Designing a space for an episode of human life.

Prerequisites:

Students have taken Basic Design 2 (or Architectural Communication Technique or Interior Architectural Communication Technique in 2012 Curriculum)
Students have taken or are taking Building Technology 1

References:

1. Bruno Zevi, *Architecture as Space: How to Look at Architecture*, 1993.
2. Donlyn Lyndon and Charles W. Moore, *Chambers For A Memory Palace*, MIT Press, 1994
3. Edward T. Hall, *The Hidden Dimension*, Peter Smith Publications, 1992
4. Francis DK Ching, *Architecture: Form, Space and Order*, Wiley, 1996.
5. Karen Franck & Bianca Lepori, *Architecture Inside Out*, Academy Press, 2000.
6. Michael Pollan, *A Place of My Own*. Penguin Press, 2008.
7. Steen Eiler Rasmussen, *Experiencing Architecture*, MIT Press, 1959.
8. Yi-Fu Tuan, *Space and Place: The Perspective of Experience*, University of Minnesota Press, 1981

ENAI603012

BUILDING TECHNOLOGY 1

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand basic technical aspects of structure, material, construc-



tion, and building comfort; should be able to formulate technical design process and integration of structure and construction technologies into a functionally effective whole; should be able to produce a report of analysis and synthesis of all aspects of building technology.

Syllabus:

Structure in nature; Basic principle of structure and construction (logic of structure, basic mechanics); Site context (natural elements that influence building); Building material (material use and position in building, material property values that influence comfort); Basic building physics (building orientation, environmental influence to comfort); Introduction to basic structure and construction principles of simple building; Introduction to working drawing.

Prerequisites: -

References:

1. Mario Salvadori, *Why Building Stands Up*, W.W. Norton & Company, 2002
2. W. O. Kilmer, *Construction Drawings and Details for Interiors: Basic Skills*, John Wiley and Sons, 2003
3. Bjorn N Sandaker, Arne P Eggen, and Mark R Cruvellier, *The Structural Basis of Architecture: Second Edition*, Routledge, 2011
4. Forest Wilson, *Structure: The Essence of Architecture*, Van Nostrand Reinhold Company, 1971
5. Mark Dekay and G. Z. Sun Brown, *Wind & Light: Architectural Design Strategies: 3rd Edition*, John Wiley & Sons, 2014
6. Francis DK Ching, *Building Construction Illustrated*, Wiley, 2014
7. Edward Allen and Joseph Iano, *The Architect Studio Companion: Rules of Thumb for Preliminary Design*, Wiley and Sons, 2002
8. Ken Parsons, *Human Thermal Environments: The effects of Hot, Moderate, and Cold Environments on Human Health, Comfort, and Performance*, CRC, 2014
9. Pete Silver and Will McLean, *Introduction to Architectural Technology*. Laurence King, 2013

DESIGN PROJECT 2

Design Project 2 is about designing space for core social unit (family, a couple, etc). Design Project 2 integrates knowledge on spatial design based on the idea dwelling, the analysis of family life cycle and daily activities, application of basic structural principles and constructions of low rise building, building systems, and principle of building physics. Design Project 2 integrates the learning activities performed in two courses that complement each other, Interior Architectural Design 2 and Building Technology 2.

ENAI604004

INTERIOR ARCHITECTURAL DESIGN 2

8 CREDIT UNITS

Learning Objectives:

Students should be able to design a dwelling as a living space for core social unit through tectonic approach and by thorough consideration of the life cycle and daily activities of the core social unit.

Syllabus:

Interior Architectural Design 2 proposes critical issues of human living space in urban community context, through the design of a dwelling. Design knowledge herewith includes the understanding concept of dwelling, observation and analysis of core social unit, formulating spatial program based on understanding of the needs of core social unit, development of spatial idea through tectonic exploration as *the art of joining* and exploration of spatial composition as an integration of *part-whole* that appropriately accommodate the programs, which are implemented into an integrated spatial design and communicated by complying with standard principles of architectural communication.



Prerequisites:

Students have taken Interior Architectural Design 1
Students have taken or are taking Building Technology 2

References:

1. Martin Heidegger, *Building Dwelling Thinking*, in *Poetry, Language, Thought*, HarperPerennial, 1975
2. Adam Sharr with Simon Unwin, *Heidegger's Hut*, in *ARQ (Architectural Research Quarterly) Vol.5 No.1*, 2001
3. J Macgregor Wise, *Home: Territory and Identity* pp. 391-396, in *INTIMUS Interior Design Theory Reader*, 2006
4. Norberg Schulz, *The Concept of Dwelling - Introduction*, Rizzoli International Publications, 1985
5. Hannah Arendt, *The Human Condition - Chapter I & II*, University of Chicago Press, 1958
6. A. Rapoport, *House Form and Culture - Chapter II Alternative Theories of House Form & Chapter III Socio-cultural Factors and House Form*, pp. 18-82, Prentice Hall Inc, 1969
7. Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction - Chapter I Introduction: Reflections on the Scope of the Tectonic*, MIT Press, 2001
8. Charles Moore, Gerrad Allen, Donlyn Lyndon, *Assembling A Room*, in *The Place of Houses*, University of California Press, 2000
9. Francis D. K. Ching, *Architecture: Form, Space and Order*, Wiley, 2014
10. Erik H. Erikson, *Life Cycle Completed - Chapter 3 Major Stages in Psychosocial Development*, W. W. Norton & Company, 1998
11. Jonathan Hill, *Immaterial Architecture - House and Home*, Routledge, 2006
12. Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects*, Birkhäuser Architecture, 2006

ENAI604014

BUILDING TECHNOLOGY 2

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand technical aspects of structure, material, construction, and building comfort for low rise building; should be able to formulate technical design process and integration of structure, construction technologies and building systems into a functionally effective whole; should be able to produce a report of analysis and synthesis of all aspects of building technology.

Syllabus:

Identification of all aspects of building technology in a simple low rise building that include: structural logic, buildability, and comfort; Introduction to in-depth knowledge on the materiality of material, construction techniques and details; Dimension and configuration of materials and their relation to structure and construction of simple building; Elements of air conditioning and lighting in a building; Introduction to basic knowledge of building utility; Creating technical documentations (working drawing).

Prerequisites: -

Students have taken Building Technology 1
Students have taken or are taking Interior Architectural Design 2

References:

1. Francis DK Ching, *Building Construction Illustrated*, Wiley, 2014
2. Arthurs Lyons, *Materials for Architect & Builders*, Butterworth-Heinemann, 2008
3. Graham Bizley, *Architecture in Details*, Architectural Press, 2008
4. Andrea Deplazes, *Constructing Architecture: Materials Processes Structures, A Handbook*, Birkhauser, 2008



5. Gail Peter Borden, *Material The Typology of Modern Tectonics*, Wiley, 2010
6. Thomas Schropfer, *Material Design*, Birkhauser Architecture, 2010
7. Norbert Lechner, *Heating, Cooling, Lighting: The Sustainable Design Methods for Architect*, Wiley, 2013
8. Charlie Wing, *How Your House Works: a Visual Guide to Understanding and Maintaining Your Home, Updated and Expanded*, RSMean, 2012
9. Corky Binggeli, *Corky Building Systems for Interior Designers*, John Wiley & Sons, 2003

DESIGN PROJECT 3

Design Project 3 focuses on buildability and performances of interior space. Design Project 3 is an integration of design knowledge through the understanding of existing technological context, exploration of technological aspects, application of structural principles, construction and materials and building support system into interior design process. Design Project 3 integrates the learning activities in two courses that support one another, Interior Architectural Design 3 and Building Technology 3.

ENAI605005

INTERIOR ARCHITECTURAL DESIGN 3

9 SKS

Learning Objectives:

Students should be able to design public interior space through exploration on development of technology ideas in interior architecture.

Syllabus:

Interior Architecture Design 3 proposes critical issues on the aspect of buildability and interior space performance. Design knowledge consists of design as a response to technological aspects of existing interior space condition; program development based on analysis of existing technological context; development of advanced tectonic ideas, including material development, detail, and construction; development of interior architecture ideas based on its performance and building system. Design assignment consists of: interior space design based on exploration of technological aspects, such as materials, assembly techniques, portable/ flexible furniture, etc.; Interior space design as a response to the existing building context in medium to large scale.

Prerequisite:

Students have taken Interior Architectural Design 2
Students is taking Building Technology 3

References:

1. Mark Taylor, Julieanna Preston (eds), *Intimus: Interior Design Theory Reader*, Academy Press, 2006
2. Mark Kingwell. "Tables, Chairs and Other Machines for Thinking," in *Intimus*, Queen's Quarterly, 2005
3. Peter Opsvik, *Rethinking Sitting*, W. W. Norton & Company, 2009
4. Eva Maria Herrmann, Marcus Kaiser, Tobias Katz, *Furnishing, Zoning: Spaces, Materials, Fit Out*, Birkhauser, 2014
5. Sylvia Leydecker, *Designing Interior Architecture: Concept, Typology, Material, Construction*,
6. Corky Binggeli, *Building Systems for Interior Designers*, Wiley, 2009
7. Lisa Godsey, *Interior Design Materials and Specification*, Fairchild Books, 2012
8. Sally Augustin, *Place Advantage: Applied Psychology for Interior Architecture*, John Wiley & Sons, 2009



ENAI605017
TEKNOLOGI BANGUNAN 3
3 SKS

Learning Objectives:

Students should be able to understand advanced technical aspects of structure, material, construction, and building comfort that are relevant to interior architecture design approach in order to respond the architectural existing condition; should be able to formulate technical design process and integration of technological aspects of interior space that consist of structural system, construction technology, materials and utility system into a functionally effective whole; should be able to create technical documentation and create analysis/synthesis report from all aspects of building technology; should be able to understand energy conservation issues and ecological sustainability in interior context.

Syllabus:

Building technology aspects that are relevant to the design approach through fitting out, remodeling, renovating, retrofitting, extension. Understanding and responding to existing structure condition. Understanding the utility of existing condition and modifying it on basis of design necessities. Knowledge of materials in terms of detail and construction, relationship between material and acoustics, lighting and maintenance, as well material innovation and development of advance material. Communication of technological aspects, such as, furniture, fixture and other interior entirety.

Prerequisites:

Students have taken Building Technology 2

Students have taken or are taking Interior Architectural Design 3

References:

1. Gary Gordon, *Interior Lighting*, Wiley, 2003
2. Corky Binggeli, *Building Systems for Interior Designers*, Wiley, 2009
3. Lisa Godsey, *Interior Design Materials and Specification*, Fairchild Books, 2012
4. John E. Flynn, Arthur W. Segil, *Architectural Interior System: Lighting, Accoustics, Air Conditioning*, Van Nostrand Reinhold, 1992
5. A. Deplazes, *Constructing Architecture: Materials, Process, Structures*, A. Basel: Birkhauser, 2005
6. Atelier Bow Wow, *Graphic Anatomy Atelier Bow-Wow*, Toto, 2007
7. Christian Schittich, *In Detail: Interior Spaces: Space, Light, Material*, Birkhauser, 2002
8. Blaine Brownell, *Transmaterial: A Catalog of Materials That Redefine our Physical Environment (1, 2, & 3)*, Princeton Architectural Press, 2005, 2008, & 2010

DESIGN PROJECT 4

Design Project 4 focuses on the design of public space. It integrates architectural typology-based design method, issue-based design and basic knowledge of urban interior. Design Project 4 integrates the learning activities performed in two courses that support each other, Interior Architectural Design 4 and Furniture: Context, Response, Object.

ENAI606006
INTERIOR ARCHITECTURAL DESIGN 4
9 CREDIT UNITS

Learning objectives:

Students develop their ability in designing interiors of public space through architectural typology-



based design approach and issue-based design approach, by considering urban interior knowledge as well creatively exploring ideas on form and space quality.

Syllabus:

Interior Architectural Design 4 proposes the critical issues of human interior living space with socio-cultural complexities as found in urban/suburban interior context, through two approaches: a) top-down approach through the exploration of design ideas based on typology, and b) bottom-up approach through exploration of issue-based design ideas. Urban interior knowledge consists of comprehension on interior concepts of urban scale. Design knowledge includes the understanding of the concept of *public*, analysis of functional interior types, spatial programming, the concept of institution and how it is elaborated into interior spatial design, the formulation of initial statement based on issues, development of architectural programs and how they are elaborated into interior spatial design. Knowledge of site and environment includes the contextual explanation of the design through the understanding toward site physical condition, socio-cultural context or urban-scaled interior space, and consideration of sustainability.

Design assignments consist of: Designing interior space within social environment context with a close kinship; Designing interior space in more complex urban environmental context.

Prerequisite:

Students have taken Interior Architectural Design 3

Students have taken or are taking Building Technology 3 course

References:

1. Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture*, Chapter 'Space', hal. 256-275, Thames & Hudson, 2000
2. Yi-Fu Tuan, *Space and Place: The Perspective of Experience*, University of Minnesota Press, 1981
3. Henri Lefebvre, *The Production of Space*, Blackwell, 1991
4. Jeremy Till, *Architecture Depends*, MIT Press, 2009
5. Karen Franck & Bianca Lepori, *Architecture Inside Out*, Academy Press, 2000
6. Giulio Carlo Argan, *On the Typology of Architecture*, in Nesbitt, *Theorizing a New Agenda for Architecture* hal. 240-246, Princeton Architectural Press, 1996
7. Jonathan D. Sime, *Creating Places or Designing Spaces*, Journal of Environmental Psychology, Vol 6, hal. 49-63, 1986
8. Andrew Ballantyne, *What is Architecture?*, Routledge, 2002
9. Aaron Betsky & Erik Adigard, *Architecture Must Burn: Manifestos for the Future of Architecture*, Gingko Press, 2001
10. Robert Venturi & Denise Brown, *Learning from Las Vegas*, MIT Press, 1977
11. Bernard Tschumi, *Architecture and Limits I-III*, in Nesbitt, *Theorizing a New Agenda for Architecture* hal. 150-167, Princeton Architectural Press, 1996
12. Suzie Attiwill & Rochus Urban Hinkel, *Urban Interior: Informal Explorations, Interventions and Occupations*, Spurbuchverlag, 2011
13. Christine McCarthy, "Before the Rain: Humid Architecture," *Space and Culture*, 6, 337, 2003
14. Graeme Brooker, *Key Interiors since 1900*, Laurence King, 2013

ENAI606018

FURNITURE: CONTEXT, RESPONSE, OBJECT

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand the concepts, functions, and construction of furniture; able to understand theories and methods to develop furniture concept and design.

Syllabus:

This course encourages student to learn about furniture and its existence in a space. Furniture is observed as a tool to connect space that is located between human bodies, as in a building or on



a broader scope. Furniture is observed as functional objects that occupy the space. Students are expected to learn and criticize a priori knowledge on furniture, so that they can consider a new perspective in designing furniture.

Prerequisites:

Students have taken or are taking Interior Architecture Design 4

References:

1. Galen Crazz, *The Chair, Rethinking Culture, Body and Design*, W. W. Norton & Company, 2000
2. Christopher Natale, *Furniture Design and Construction for the Interior Designer*, Fairchild Pub, 2009
3. Jim Postell, *Furniture Design*, Wiley, 2007.
4. M. F. Ashby, Kara Johnson, *Materials and Design: The Art and Science of Material Selection in Product Design*, Elsevier, 2002

ENAI607007

INTERIOR ARCHITECTURAL DESIGN 5

9 CREDIT UNITS

Learning Objective:

Students should be able to design interior architecture based on particular design method; should be able to produce design ideas that demonstrate buildability and compliance to general building and interior codes; should be able to demonstrate the application of knowledge on the principles of building technology that are relevant to interior architectural design.

Syllabus:

Designing with *fitting out*, *remodelling*, *renovating*, *retrofitting*, atau *extension* approach within design units. Design units offered may include but not limited to: typology-based design (commercial, educational, hospitality); designing based on adaptive reuse; evidence-based design; designing with technological, computational, or parametric approach. Knowledge and implementation of building and interior codes that include safety, security, health, comfort, and accessibility. Design communication that comply with standard drawing convention. Awareness and understanding of role of various disciplines of design, construction, mechanical and electrical in interior architectural design process.

Prerequisites: Students have taken Interior Architectural Design 4

References:

1. Stewart Brand, *How Buildings Learn: What Happens After They're Built*, Penguin Books, 1995
2. Sally Stone and Graeme Brooker, *Re-Readings: Interior Architecture and the Design Principles of Remodelling Existing Buildings*, RIBA Publishing, 2014
3. Adrian Forty, *Words and Buildings: a Vocabulary of Modern Architecture*, Thames and Hudson, 2004
4. Fred Scott, *On Altering Architecture*, Routledge, 2008
5. Charles Bloszies, *Old Buildings New Designs: Architectural Transformations*, Princeton Architectural Press, 2011
6. Julianna Preston, *Interior Atmosphere*, Architectural Design series, May/June 2008
7. Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects*, Birkhäuser Architecture, 2006
8. Edward Dimendberg, *Diller Scofidio + Renfro: Architecture After Images*, University Of Chicago Press, 2013
9. Atelier Bow Wow, *Graphic Anatomy Atelier Bow-Wow, Toto*, 2007
10. Christopher Gorse and David Highfield, *Refurbishment and Upgrading of Buildings*, Spon



- Press, 2009
11. Corky Binggeli, *Building Systems for Interior Designers*, John Wiley & Sons, 2009

ENAI600008
UNDERGRADUATE THESIS
6 CREDIT UNITS

Learning Objectives:

Student should be able to identify, study and communicate issues within specific area of study related to architecture; able to develop basic skills in scientific reading, researching and writing; able to develop understanding of research as an activity that requires systematic and logical thinking; able to develop critical understanding of various architectural issues.

Syllabus:

The thesis begins with an inquiry into what the student wishes to study in depth. It involves the understanding of issues and explanation of the understanding with limited depth level. At this level, the student is neither required to solve a problem nor create or invent something new that would contribute to the discipline architecture. Simple investigation is performed through literature search and/or case studies. Originality. Modes of writing: descriptive, narrative, explanatory or argumentative.

Prerequisites: -

Students have earned 114 credit units and have taken Interior Architectural Design 4

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
2. David Evans & Paul Gruba, *How To Write A Better Thesis Dissertation*, Springer, 2014
3. F. Crews. *The Random House Handbook*, ed, pgs 10-114, McGraw-Hill Higher Education, 1992
4. I. Border and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005

ENAI600008
FINAL PROJECT
6 CREDIT UNITS

Learning objectives:

Student should be able to identify, study and communicate issues within specific area of study related to architecture; able to develop basic skill in analyzing and synthesizing theory and demonstrate it through design; able to develop understanding of research as an activity that requires systematic and logical thinking; able to develop critical understanding of various architectural issues.

Syllabus:

The thesis begins with an inquiry into what the student wishes to study in depth. It involves the understanding of issues and explanation of the understanding with limited depth level, which is demonstrated through architectural design.

Prerequisites:

Students have earned 114 credit units and have taken Interior Architectural Design 5

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
2. I. Border and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.



3. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
4. Iain Border and Katarina Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. Murray Fraser, *Design Research in Architecture*, Ashgate Publishing, 2013

COURSE DESCRIPTION: ELECTIVE COURSES

ENAI600019 ACOUSTICS 3 CREDIT UNITS

Learning Objectives:

Student should be able to understand basic principles of acoustic in space and environment; able to conduct analysis in order to create good acoustic design.

Syllabus:

Basic acoustics, characteristics of sounds, acoustic criteria in space, sound intensification and sound isolation, environmental noise.

Prerequisites: -

References:

1. Leslie L. Doelle & Lea Prasetio, *Akustik Lingkungan*, Erlangga, 1993
2. PH Parkin & HR Humphreys, *Acoustics Noise and Buildings*, Faber and Faber Ltd, 1984
3. Finarya Legoh & Siti Hajarinto, *Buku Ajar Akustik*, 2002

ENAI600020 ANATOMY OF SPACE 3 CREDIT UNITS

Learning Objectives:

Students should be able to master the principles in disassembling the elements and system of a space in terms of user's needs.

Syllabus:

Dissection method in anatomy as an approach to analyze space, understanding the parts, the characteristics, the relationship among one another and how together they create a working system of space; Anatomy of domestic space: domestic service space, space saving strategy, flow, and flexibility; Anatomy of public space: hierarchy and public space organization, back and front separation, grid; Anatomy of space for special needs: the concept of enabling environment, architecture for users with limited vision, hearing difficulty, limited mobility, architecture for children with special needs (such as ADHD, autism, mental retardation).

Prerequisites: -

References:

1. Jean Baudrillard, *Structures of Interior Design in The Domestic Space Reader*, University of Toronto Press, 2012
2. Karel Teige, *The Minimum Dwelling*, MIT Press, 2002
3. Jeremy Till & Tatjana Schneider, *Flexible Housing*, Routledge, 2007
4. Erving Goffman, *Front and Back Region in Everyday Life in Everyday Life Reader* by Ben Highmore, Routledge, 2001
5. Jos Boys, *Doing Disability Differently: An alternative handbook on architecture, dis/ability and designing for everyday life*, Routledge, 2014

ENAI600021
ART APPRECIATION
3 CREDIT UNITS

Learning Objectives:

Students should be able to understand art and art appreciation and to apply this practice through delivering experience (sense and aesthetic) and understanding (concept and theory) of art works; on basis of formal-technic criteria; should be able to demonstrate a comprehension on theories through interpretive view of visual and spatial art works that are relevant to interior architecture; understand context of art gallery and curatorial process.

Syllabus:

Art and art appreciation. Critic and art appreciation. Aesthetic principles. Art history timeline. Visual elements in visual artwork. Spatial art, multisensory art, public art. Introduction to art and national gallery. The role in art. Curating

Prerequisites: -

References:

1. E H Gombrich, *The Story Of Art*, Paidon Press, 1995
2. Immanuel Kant, *The Critique Of Judgement*, Oxford University Press, 2009
3. Maurice Merleau-Ponty, *Phenomenology Of Perception*, Routledge, 2002
4. Thierry de Duve, *Kant After Duchamp*, MIT Press, 1996
5. L H Hanks, J Hale & S Macleod, *Making: Narratives, Architectures, Exhibitions, (Museum Meaning)*, Routledge, 2012
6. Joshua C Taylor, *Learning To Look*, University of Chicago Press, 1957

ENAI600022
FURNITURE DESIGN
3 CREDIT UNITS

Learning Objectives:

Students should be able to understand the basic principles of designing furniture as disposable items that serve as forming element of spatial quality, in relation to architectural design, space and interiority.

Syllabus:

Furniture as disposable objects with certain prerequisites based on the intention behind the design. Interiority and spatial quality as inseparable aspects of furniture design. After such comprehension is established, the learning process will include: basic furniture construction and furniture construction that shapes the space quality.

Prerequisites: -

References:

1. Joyce Ernest, *The Technique of Furniture Making*, B.T. Batsford Limited, 1970
2. *Sunset Series for Furniture Making, Cabinet and Book Shelves Making, Bedroom Storage; Kitchen Storage.*
3. Ernest Scott, *The Mitchell Beazley Illustrated Encyclopaedia of Working in Wood: Tools - Methods - Materials - Classic*, Mitchell Beazley, 1992

ENAR600026
PHOTOGRAPHY
3 CREDIT UNITS



Learning Objectives:

Students are able to produce photography works with artistic elements and architectural photography communication through photographic process and photo-essays.

Syllabus:

Understanding visual communication principles through two-dimensional medium, lighting, principles of zone system, principles of visual graphics, exposure management, and photo image perfection.

Prerequisites: -

References:

1. Michael Freeman, *The Photographer's Eyes*, Focal Press, 2007
2. Michael Freeman, *Perfect Exposure*, Focal Press, 2009
3. Michael Freeman, *The Photographer's Story*, Focal Press, 2012
4. Graham Clarke, *The Photograph*, Oxford University Press, 1997
5. Marita Sturken & Lisa Carthwright, *Practice of Looking*. Oxford University Press, 2nd edition, 2009
6. Soeprapto Soedjono, *Pot-Pourri Fotografi*, Universitas Trisakti, 2007

ENAI600023

LIFESTYLE AND INTERIOR ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand the role of lifestyle in interior and its application.

Syllabus:

Lifestyle principles in society and in interior design. The development of style from the beginning of modern period until now and its role in interior design. Appropriate style in society and its effect in interior design.

Prerequisites: -

References:

1. Idi Subandy Ibrahim, *Lifestyle Ecstasy: Kebudayaan Pop dalam Masyarakat Komoditas Indonesia*, Jalasutra, 2004
2. Jean Baudrillard, *The Consumer Society: Myths and Structures 1st Ed*, Sage Publications Ltd, 1998
3. Dominic Strinati, *An Introduction to Theories of Popular Culture 2nd Ed*, Routledge, 2004
4. Agus Sachari & Yan Yan Sunarya, *Modernisme: Sebuah Tinjauan Historis Desain Modern*, Balai Pustaka, 1999
5. David Chaney, *Life Style: Key Ideas*, Routledge, 1996.
6. Francois Baudot, *Styles: Compendium of Interiors*, Assouline, 2005

ENAR600029

2D DIGITAL DESIGN COMMUNICATION

3 CREDIT UNITS

Learning Objectives:

Student should be able to use 2D digital drawing media in architectural design process; should be able to choose and use various way and technique in drawing for particular purpose.

Drawings in CAD and NURBS, pixel base drawing, vector base drawing, architectural representation and diagram.

Prerequisites:

Student have taken Basic Design 2 (or Architectural Communication Techniques or Interior Architectural Communication Techniques in 2012 Curriculum)

References:

1. Hamad M.M, *Autocad 2010 Essentials*, Jones and Bartlett, 2010
2. Robert McNeel & Associates, *Rhinoceros: NURBS Modelling for Windows*, USA, 1998
3. H Sondermann, *Photoshop in Architectural Graphics*, SpringerWienNewYork, 2009

ENAR600029

3D DIGITAL DESIGN COMMUNICATION

3 CREDIT UNITS

Learning Objectives:

Student should be able to use 2D digital modelling tool in architectural design process; should be able to choose and use various way and technique in digital modelling; should be able to create appropriate graphical representation for the model.

Syllabus:

Polygon and NURBS-based digital model, inter-platform exchange, from 2D representation to 3D model, rendering techniques.

Prerequisites:

Student have taken Basic Design 2 (or Architectural Communication Techniques or Interior Architectural Communication Techniques in 2012 Curriculum)

References:

1. Hamad M.M, *Autocad 2010 Essentials*, Jones and Bartlett, 2010
2. Robert McNeel & Associates, *Rhinoceros: NURBS Modelling for Windows*, USA, 1998
3. H Sondermann, *Photoshop in Architectural Graphics*, SpringerWienNewYork, 2009
4. Brightman, M. 2013. *The Sketchup Workflow for Architecture*. Wiley.

ENAI600024

MATERIALITY IN INTERIOR ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand material as an essential part of thinking and design process.

Syllabus:

Conceptual understanding of material through the idea of materiality; Relationship between material and human body, space and senses; Tectonic and detail of material; Material innovation in interior architecture.

Prerequisites: -

References:

1. Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, The MIT press, 1995
2. K Lloyd Thomas (ed), *Material Matters: Architecture and Material Practice*, Routledge, 2007
3. Martin Bechtold, *Innovative Surface Structures: Technologies and Applications*, Taylor &



- Francis, 2008
4. Blaine Brownell, *Transmaterial: A Catalog of Materials That Redefine our Physical Environment (1, 2, & 3)*, Princeton Architectural Press, 2005, 2008, & 2010
 5. Blaine Brownell, *Material Strategies: Innovative Applications in Architecture*, Princeton Architectural Press, 2012
 6. Michael Bell and Jeannie Kim, ed, *Engineered transparency: the technical, visual, and spatial effects of glass*, Princeton Architectural Press, 2009
 7. Andrea Bruno, et al, *Featuring Steel: Resources Architecture Reflections*, Arcelor Mittal, 2009
 8. Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History*, W.W. Norton, 1948
 9. *Innovation in Glass*, Corning: Corning Glass Museum, 1999
 10. Sheila Kennedy, *KVA: Material Misuse*, Architectural Association, 2001
 11. Klaus-Michael Koch with Karl J. Habermann, *Membrane Structures: Innovative Building with Film and Fabric*, Prestel, 2004
 12. Christian Schittich, et al, *Glass Construction Manual*, Birkhauser, 2007
 13. Thomas Schropfer, *Material Design: Informing Architecture by Materiality*, Birkhauser, 2011
 14. Toshiko Mori, *Immaterial Ultramaterial*, George Brazillier, 2002

ENAI600025

SPATIAL OBJECTS

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand and identify spatial objects with potential in creating the quality of interior space; develop spatial object design ideas within interior architecture context and realize it into prototype.

Syllabus:

Understanding of spatial object and its role in producing spatial quality; creative methods to develop spatial object design; materials, tools, techniques and technology in the making of spatial objects; developing the design of spatial objects; realization of design into prototype.

Prerequisites: -

References:

1. Michalko, Michael. *Thinkertoys*. Berkeley, Calif.: Ten Speed Press, 2006
2. Moore, Rowan. *Why We Build*.
3. Gorman, Carma. *The Industrial Design Reader*. New York: Allworth Press, 2003
4. Meikle, Jeffrey L. *Design In The USA*. Oxford: Oxford University Press, 2005
5. Yelavich, Susan, and Elio Caccavale. *Design As Future-Making*.
6. Rodgers, Paul, and Alex Milton. *Product Design*. London: Laurence King, 2011
7. Aspelund, Karl. *The Design Process*. Fairchild Books.
8. Norman, Donald A. *The Psychology of Everyday Things*. New York: Basic Books, 1988
9. Karl. T. Ulrich & Steven D. Epingger. *Product Design Development*. 3rd Edition. Mc Graw-Hill. 2004
10. Dieter. *Design Engineering*, 3rd edition, Mc.Graw Hill, 2000
11. James G. Bralla. *Design For Excellence*. McGrawHill, 1996
12. Milton D. Rosenav, Jr. et. al. *The PDMA Handbook of New Product Development*, John Willey & Sons, 1996
13. Hamid Noor & Russel Radford. *Production & Operation Management*, McGrawHill, 1995

ENAR600037

ARCHITECTURAL PSYCHOLOGY

3 CREDIT UNITS



Learning Objectives:

Student should be able to use basic conceptual knowledge of psychological process to identify and analysis human need in using built environment and outdoor space.

Syllabus:

Relationship between architecture and human behavior, motivation, needs, and value as basis of human actions, Gestalt perception, Ecological perception (Gibson), Affordances and its implementation in architecture, definition of cognition and its implementation in architecture, personal space, privacy, territoriality, crowding, post occupancy evaluation (POE).

Prerequisites: -**References:**

1. Bell, Fischer, Greene, *Environmental Psychology*, Harcourt Publisher, 1996
2. Bryan Lawson, *The Language of Space*, Architectural Press, 2001
3. Byron Mikellides, *Architecture for People: Exploration in a New Humane Environment*, 1980
4. Wolfgang F.E. Preisser, Harvey Z. Rabinowitz, Edward T. White, *Post-Occupancy Evaluation*, Van Nostrand Reinhold, 1988
5. Dak Kopec, *Environmental Psychology for Design*, Fairchild Books, 2012

ENAI600026**EXHIBITION SPACE AND NARRATIVE****3 CREDIT UNITS****Learning Objectives:**

Students should be able to understand the basic principles of exhibition space design through narrative approach and critical thinking towards the interpretive experiences of objects.

Syllabus:

Various types of exhibition space, the process of designing exhibition space to create meaningful experiences of objects, ideas, and information in physical spaces and virtual spaces. Exhibition space types, exhibition, museum, pop-up event. Narrative approach in spatial design. Development of curatorial concept, designing display strategies, graphic and materials.

Prerequisites: -**References:**

1. Martin M Pegler, *Visual Merchandising and Display*, Blomsbury Academic, 2011
2. David Dornie, *Exhibition Design*, Laurence King Publisher, 2006
3. Pam Locker, *Basic Interior Design : Exhibition Design*, Ava Publishing, 2011
4. Reesa Greenberg, Bruce W.Ferguson and Sandy Nairne, *Thinking About Exhibitions*, Routledge, 1996
5. Kossman De Jong, *Engaging Space: Exhibition Design Explored*, Frame Publisher, 2012
6. Bryan Lawson, *Language of Space*, Routledge, 2001
7. L H Hanks, J Hale & S Macleod, *Making: Narratives, Architectures, Exhibitions, (Museum Meaning)*, Routledge, 2012
8. David Dean, *Museum Exhibition*, Routledge, 1996
9. Kathleen McLean, *Planning for People in Museum Exhibitions*, Association of Science-Technology Centers, 1993
10. Nigel Holmes, *The Best in Diagrammatic Graphics*, Rotovision, 1996
11. Giles Velarde, *Designing Exhibitions 2nd ed*, Gower Pub, 2001
12. Stephanie Weaver, *Creating Great Visitor Experiences: A Guide for Museums, Parks, Zoos, Gardens & Libraries*, Routledge, 2008
13. John H Falk, *Identity and the Visitor Experience*, Routledge, 2009



14. Nina Simon, *The Participatory Museum*, Museum 2.0, 2010
15. Porter Abbott, H, *The Cambridge Introduction to Narrative*, Cambridge University Press, 2002
16. Potteiger, M and Purington, J, *Landscape Narratives: Design Practices for Telling Stories*, John Wiley and Sons, 1998

ENAI600027

ART AND ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Students should be able to understand the potential of art in architectural space; create art in architectural setting.

Syllabus:

Art and architecture, Art Nouveau and Art Deco, Bauhaus, International style, Cubism, Surrealism, dll, Art and Architecture installation, installation in the setting: Happy Art; detail in architectural element.

Prerequisites: -

References:

1. Cinthya Maris Dantzie, *Design Dimensions, An Introduction to the Visual Surface*, Prentice Hall College Div, 1990
2. Maly and Dietfried Gerhardus, *Cubism and Futurism: The evolution of the self-sufficient Picture*, Phaidon Oxford
3. Arsen Pohribny, *Abstract Painting*, Phaidon Oxford
4. "The Ideal Place" in Art and Design Magazine No.42.
5. Chris Drury, *Silent Spaces*, Thames and Hudson Ltd, 1989
6. Fiedler Jeannine and Peter Feierabend, *Bauhaus*, Konemann, 1999
7. Booqs, *1000 Details in Architecture*, Belgium, 2010
8. William Hardy, *A Guide to Art Nouveau Style*, World Pubns, 1996
9. Patrick Lowry, *The Essential Guide to Art and Design*, Hodder & Stoughton, 1997

ENAI600028

LIGHTING DESIGN FOR INTERIOR ARCHITECTURE

3 CREDIT UNITS

Learning Objectives:

Student should be able to design lighting fixtures and ambience for interior and exterior uses, using artificial as well as natural lights through a critical, active collaborative learning process based on functional and aesthetical problems.

Syllabus:

Basic lighting, color, natural light, artificial light, light distribution, interior lighting, exterior lighting (façade of a house and high rise), urban lighting.

Prerequisites: -

References:

1. William M.C. Lam, *Perception and Lighting as Formgivers for Architecture*, McGraw-Hill, 1977
2. Norbert Lechner, *Heating Lighting Cooling*, 2nd edition, translated by PT RajaGrafindo Persada, 2007



3. John E Flyinn, *Architectural Interior System*, Van Nostrand Reinhold Environmental Engineering Series, Van Nostrand Reinhold Company, 1971

ENAI600029
INDEPENDENT STUDY
3 CREDIT UNITS

Learning Objectives:

Students should be able to demonstrate advanced architectural knowledge on particular topic and to implement the knowledge into the development of ideas of architectural intervention.

Syllabus:

Advanced studies on architectural knowledge in particular context; development of architectural intervention ideas based on thorough inquiry of contexts and theoretical inquiry on related topic.

Prerequisite: -

References: Relevant references to the topic offered.

ENAI600030
DESIGN STUDY
3 CREDIT UNITS

Learning Objectives:

Students should able to develop basic skills on reading, inquiry and writing a scientific writing related to design activities.

Syllabus:

Communicating design process through a writing that complies with scientific writing requirements; Communicating systematically literature review, development of design methods and design process through in writing.

Prerequisite: Student has passed Interior Architectural Design 4 and is taking Final Project.

References:

1. John Zeisel, *Inquiry by Design*, W. W. Norton & Company, 2006
2. David Evans & Paul Gruba, *How To Write A Better Thesis Dissertation*, Springer, 2014
3. F. Crews. *The Random House Handbook*, ed, pgs 10-114, McGraw-Hill Higher Education, 1992
4. I. Borden and K. Ruedi, *The Dissertation: an Architecture Student's Handbook*, Oxford University Press, 2000.
5. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005

ENAI600031
CAPITA SELECTA
3 CREDIT UNITS

Learning Objective:

Students should be able to expand their knowledge on various topics that support acquisition of interior architectural knowledge and design skills.

Syllabus:

Selected topics that are relevant to interior architectural knowledge, design skills and their recent development.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAI600032
INTERNSHIP
3 CREDIT UNITS**

Learning Objectives:

Students should be able to understand the processes of planning, implementation and evaluation of engineering activities; to demonstrate knowledge on teamwork of relevant disciplines in professional practice; to demonstrate knowledge on the processes of planning, design and implementation of a built environment; to get involved as assistant interior designer, assistant field project officer, assistant field supervisor, or community interior architect.

Syllabus:

Real project management process in a company, architecture consultant or organization. Techniques of writing simple proposal and reporting field work. Techniques of presentation, Method of managing material, data, equipment, human resources and coordination among stakeholders in engineering planning and implementation activities.

Prerequisite: -

References: -

**ENAI600033
SPECIAL TOPIC ON INTERIOR ARCHITECTURE
3 CREDIT UNITS**

Learning Objectives:

Students should be able to demonstrate knowledge on current discourse on interiority and interior architecture.

Syllabus:

Studies on the development of theories on interiority; current issues on interior architecture and interiority; the development in other relevant disciplines that have impacts of the development of interior architectural design theories and methods.

Prerequisite: -

References: Relevant references to the topic offered.

PROFESSIONAL PROGRAM
FOR ARCHITECTS

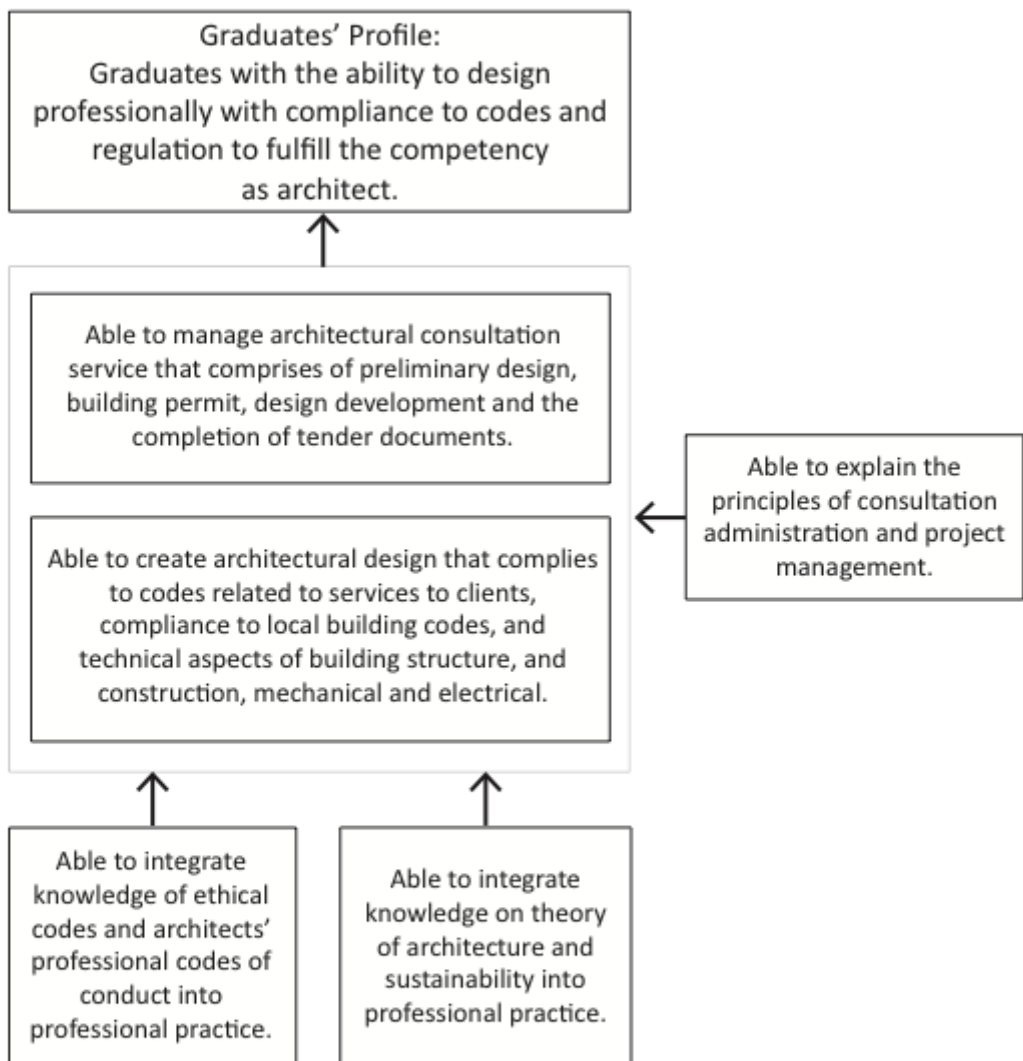


5. PROFESSIONAL PROGRAM FOR ARCHITECT

Program Specification

1	Awarding Institution	Universitas Indonesia	
2	Teaching Institution	Universitas Indonesia	
3	Program	Architects Professional Program	
4	Class	Regular	
5	Degree Offered	Arsitek (Ar.)	
6	Accreditation / Recognition	-	
7	Language of Instruction	Bahasa Indonesia	
8	Study Scheme (Full Time / Part Time)	Full Time	
9	Entry Requirement	Graduate from Undergraduate Architecture Program	
10	Duration of Study	1 year	
	Semester	Total Semester	Weeks/semester
	Regular	2	17
	Short (optional)	-	-
11.	Graduates profile: Graduates with the ability to design professionally with compliance to codes and regulation to fulfill the competency as architect.		
12.	Graduates' Competencies: <ol style="list-style-type: none"> 1. Able to create architectural design that complies to codes related to services to clients, compliance to local building codes, and technical aspects of building structure, and construction, mechanical and electrical. 2. Able to manage architectural consultation service that comprises of preliminary design, building permit, design development and the completion of tender documents. 3. Able to integrate knowledge of ethical codes and architects' professional codes of conduct into professional practice. 4. Able to integrate knowledge on theory of architecture and sustainability into professional practice. 5. Able to explain the principles of consultation administration and project management. 		
13	Course Composition		
No	Type of Courses	Credits	Percentage
	University General Subjects	0	0%
	Basic Engineering Subjects	0	0%
	Architecture Core Subjects	21	87,5%
	Electives	3	12,5%
	Total	24	100%
14.	Total Credits for Graduation		24 Credit Semester Unit

NETWORK COMPETENCIES



COURSE STRUCTURE

PROFESSIONAL PROGRAM FOR ARCHITECT

KODE	SUBJECT	sks
Semester 1		
ENAR701001	Design Project 1	6
ENAR701003	Professional Ethics and Practice	3
ENAR701004	Technology & Sustainable Environment	3
	Sub Total	12
Semester 2		
ENAR702002	Design Project II	6
ENAR702005	Architectural Design Theory	3
	Elective*)	3
	Sub Total	12
	Total	24

*In addition to taking courses Elective Subjects for Professional Program, student can also take Compulsory Subjects and Elective Subjects available in Master of Architecture Program or other department which are equal with the Program.

Resume

Wajib Program Studi	21
Peminatan	
Jumlah	21
Pilihan	3
Total Beban Studi	24

ELECTIVES

KODE	SUBJECT	SKS
ENAR700006	Building Information Modelling	3
ENAR700007	Capita Selecta	3

COURSE DESCRIPTION**ENAR701001
DESIGN PROJECT I
6 CREDIT UNITS****Learning Objectives:**

Students should be able to understand and apply the knowledge of design presentation techniques, ethics, code of compliances relating to the preliminary design through design development for the purposes of building permit, project administration and project management at consultant which relate to the production and documentation of drawings, details, and building specification; Students should be able to demonstrate knowledge of various building materials.

Syllabus:

Professional ethics; relationship of architect and the client is focused on understanding, expression or presentation of ideas and service to clients as outlined in preliminary design products; understanding of local building codes; producing Bill of Quantity (BQ); administration of architecture consultation including the preparation of contracts and payment for services; the role of Building Information Modeling (BIM) in design practice.

Prerequisites: -**References:**

1. Hall, Dennis J (ed), *Architectural Graphic Standards* (12th edition), American Institute of Architects, 2016
2. Emmitt, Stephen, *Design Management for Architects*, (2nd edition), Wiley-Blackwell, 2014
3. Kensek, Karen, and Douglas Noble, *Building Information Modeling: BIM in Current and Future Practice*, John Wiley & Sons, 2014
4. Holzer, Dominik, *The BIM Manager's Handbook: Guidance for Professionals in Architecture, Engineering and Construction*, John Wiley & Sons, 2016
5. Ching, D.K, and Barry S.Onouye, Douglas Zuberbuhler, *Building Structure Illustrated* (2nd edition). John Wiley & Sons, 2014.
6. American Institute of Architects, *The Architect's Handbook of Professional Practice* (15th edition), 2013
7. *RIBA Handbook for Practice Management* (9th edition), 2013
8. Schittich, C, *In Detail, Cost-Effective Building, Economic Concepts and Constructions*, Birkhauser, 2007
9. *Buku Pedoman Hubungan Kerja antara Arsitek dengan Pengguna Jasa*, Ikatan Arsitek Indonesia
10. Peraturan Daerah Provinsi DKI Nomor 1 Tahun 2014 tentang Rencana Detail Tata Ruang dan Peraturan Zonasi
11. Peraturan Daerah Provinsi DKI Nomor 7 Tahun 2010 tentang Bangunan Gedung
12. Pedoman Detail Teknis Ketakotaan Pemerintah Daerah Provinsi DKI Jakarta 1995
13. Peraturan Kepala Dinas DKI Jakarta (Perkadis) Nomor 3 Tahun 2014
14. Peraturan Menteri PU Nomor 26 Tahun 2008 tentang Persyaratan Teknis Sistem Proteksi Kebakaran pada Bangunan Gedung dan Lingkungan
15. Peraturan Menteri PU Nomor 30 Tahun 2006 tentang Pedoman Teknis Fasilitas dan Aksesibilitas pada Bangunan Gedung dan Lingkungan
16. Peraturan Gubernur Provinsi DKI Nomor 38 Tahun 2012 tentang Bangunan Gedung Hijau

**ENAR701003
PROFESSIONAL ETHICS AND PRACTICE
3 CREDIT UNITS****Learning Objectives:**

Student should be able to demonstrate understanding of architects as profession and normative aspects of professional practice; Student should be able to understand the relationship between formal architecture education in university and further professional process to become architect,



according to national and international agreement.

Syllabus:

Architect profession, architectural project, architectural firm; description about architectural practice where professional ethics become the main guide for conduct.

Professional ethics: understanding of law implication, code of ethics, professional code of conduct; knowledge on the existing resources to understand the emerging issues in architectural practice.

Relationship with professional regulation: Regulation and code of ethics used by Ikatan Arsitek Indonesia (IAI), and international recommendation/policy which is agreed by all the members of Union Internationale des Architectes (UIA).

Pre-requisites: -

References:

1. Kode Etik Ikatan Arsitek Indonesia (IAI)
2. Dokumen *Union Internationale des Architectes (UIA)*
3. Landasan Etika Profesi

ENAR701004

TECHNOLOGY AND SUSTAINABLE ENVIRONMENT

3 CREDIT UNITS

Learning Objectives:

Students should be able to perform an analysis on various approaches and strategies in building technology and the design of built environment towards sustainable environment.

Syllabus:

Environmental sustainable building technology principles; building technology, engineering, construction process, and building service and their impact on environmental sustainability; relationship among climate, built environment, construction, energy consumption and human well-being; application of building technology strategy in design project that complies with relevant building and environmental standard and regulation.

Pre-requisites:

References:

1. Y. B. Mangunwijaya, *Teknologi dan Dampak Kebudayaanannya*, Jakarta: Yayasan Obor Indonesia. 1993
2. T. Jacob, *Menuju Teknologi Berperikemanusiaan: Pikiran-Pikiran Tentang Indonesia*, Jakarta: Yayasan Obor Indonesia. 1996
3. Max Hueber Verlag Munchen, *Man and Technology*, Gesamtersellung: Verlagsanstalt Man Dillingen/Donau. 1963
4. Charles Susskind, *Understanding Technology*, The Hopkins University Press. 1973
5. A. Charis Zubair, *Etika Rekayasa Menurut Konsep Islam*, Yogyakarta: Pustaka Pelajar Offset, 1997
6. Peter Graham, *Building Ecology: First Principles For A Sustainable Built Environment*, Blackwell Publishing. 2003
7. *Architecture For A Sustainable Future*, Institute For Building Environment and Energy Conservation (IBEC). 2005
8. Edward Burtynsky, *Manufactured Landscapes*, Zeitgeist Video. 2007
9. Discovery Channel, *Extreme Engineering: Turning Torso*, Discovery Communication. 2010
10. Discovery Channel, *Next World: Future Megatropolis*, Discovery Communication. 2010

ENAR702002

DESIGN PROJECT II

6 CREDIT UNITS

Learning Objectives:

Student should be able to understand and apply knowledge on design presentation technique, ethics, code of compliances which are related to the production of complete tender document and proj-



ect supervision; Student should be able to describe construction management process that covers interdisciplinary coordination, adaptation of design to site condition, and regular site supervision; Students should be able to make decision regarding the use of building materials in the design.

Syllabus:

Professional ethics; relationship between architect and engineer and other related experts which is focused on collaborative work, application of engineering standard which is demonstrated in complete tender document including working drawings, technical specification and implementation, and budget planning; the role of Building Information Modeling (BIM) in design practice.

Pre-requisite: -

References:

1. Hall, Dennis J. (ed), *Architectural Graphic Standards* (12th edition), American Institute of Architects, 2016
2. Emmitt, Stephen, *Design Management for Architects*, (2nd edition), Wiley-Blackwell, 2014
3. Kensek, Karen, and Douglas Noble, *Building Information Modeling: BIM in Current and Future Practice*, John Wiley & Sons, 2014
4. Holzer, Dominik, *The BIM Manager's Handbook: Guidance for Professionals in Architecture, Engineering and Construction*, John Wiley & Sons, 2016
5. Ching, D.K, and Barry S.Onouye, Douglas Zuberbuhler, *Building Structure Illustrated* (2nd edition). John Wiley & Sons, 2014.
6. American Institute of Architects, *The Architect's Handbook of Professional Practice* (15th edition), 2013
7. *RIBA Handbook for Practice Management* (9th edition), 2013
8. Schittich, C, *In Detail, Cost-Effective Building, Economic Concepts and Constructions*, Birkhauser, 2007
9. *Buku Pedoman Hubungan Kerja antara Arsitek dengan Pengguna Jasa*, Ikatan Arsitek Indonesia
10. Peraturan Daerah Provinsi DKI Nomor 1 Tahun 2014 tentang Rencana Detail Tata Ruang dan Peraturan Zonasi
11. Peraturan Daerah Provinsi DKI Nomor 7 Tahun 2010 tentang Bangunan Gedung
12. Pedoman Detail Teknis Ketatakotaan Pemerintah Daerah Provinsi DKI Jakarta 1995
13. Peraturan Kepala Dinas DKI Jakarta (Perkadis) Nomor 3 Tahun 2014
14. Peraturan Menteri PU Nomor 26 Tahun 2008 tentang Persyaratan Teknis Sistem Proteksi Kebakaran pada Bangunan Gedung dan Lingkungan
15. Peraturan Menteri PU Nomor 30 Tahun 2006 tentang Pedoman Teknis Fasilitas dan Aksesibilitas pada Bangunan Gedung dan Lingkungan
16. Peraturan Gubernur Provinsi DKI Nomor 38 Tahun 2012 tentang Bangunan Gedung Hijau

ENAR702005

ARCHITECTURAL DESIGN THEORY

3 CREDIT UNITS

Learning Objectives:

Students are able to perform critical analysis to architectural ideas in classic and contemporary architectural literature, and able to identify the relationship between theory and practice in architectural design practice.

Syllabus:

The development in the mechanism of generating architecture from classical architecture to contemporary architecture; current ideas on the discourses of architectural design theory and practice; multidisciplinary approach (art, mathematics, natural sciences, social sciences) in architectural theory and design.

Pre-requisite:-

References:

1. Stephen Cairns, Greig C Crysler, Hilde Heynen. *The SAGE Handbook of Architectural Theory*. SAGE Publications, 2012.



2. Michael Hays, *Architecture Theory since 1968*, MIT Press, 1998.
3. Kate Nesbitt, *Theorizing a New Agenda of Architecture: An Antology of Architectural Theory 1965-1995*. Princeton Architectural Press, 1996.
4. Charles Jenks & Karl Kropf, *Theories and Manifestos of Contemporary Architecture*. John Wiley and Sons, 1997.
5. Vitruvius. *The Ten Books on Architecture*, trans by M. H. Morgan. New York: Dover Publications, 1960.
6. D'Arcy Thompson, *On Growth and Form*. 1961.
7. Aaron Betsky & Erik Adigard, *Architecture Must Burn*. Gingko Press, 2000.
8. A+P Smithson. Irene Scalbert, *Towards a Formless Architecture: The House of the Future*, 1999.

ENAR700006
BUILDING INFORMATION MODELING
3 CREDIT UNITS

Learning Objectives:

Student should be able to use Building Information Modeling tool in the design, development, and documentation of architectural design.

Syllabus:

Introduction to BIM in architecture; model development, information and database handling, analysis and documentation.

Pere-requisites: -

References:

1. Eastman, C., Eastman, C.M., Teicholz, P. and Sacks, R., *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors*. John Wiley & Sons, 2011
2. Kensek, K, and Noble, D., *Building Information Modeling: BIM in Current and Future Practice*, John Wiley & Sons, 2014
3. Holzer, D, *The BIM Manager's Handbook: Guidance for Professionals in Architecture, Engineering and Construction*, John Wiley & Sons

ENAR700007
CAPITA SELECTA
3 CREDIT UNITS

Learning Objectives:

Students should be able to expand their knowledge on various topics that support the mastery of professional architecture competence.

Syllabus:

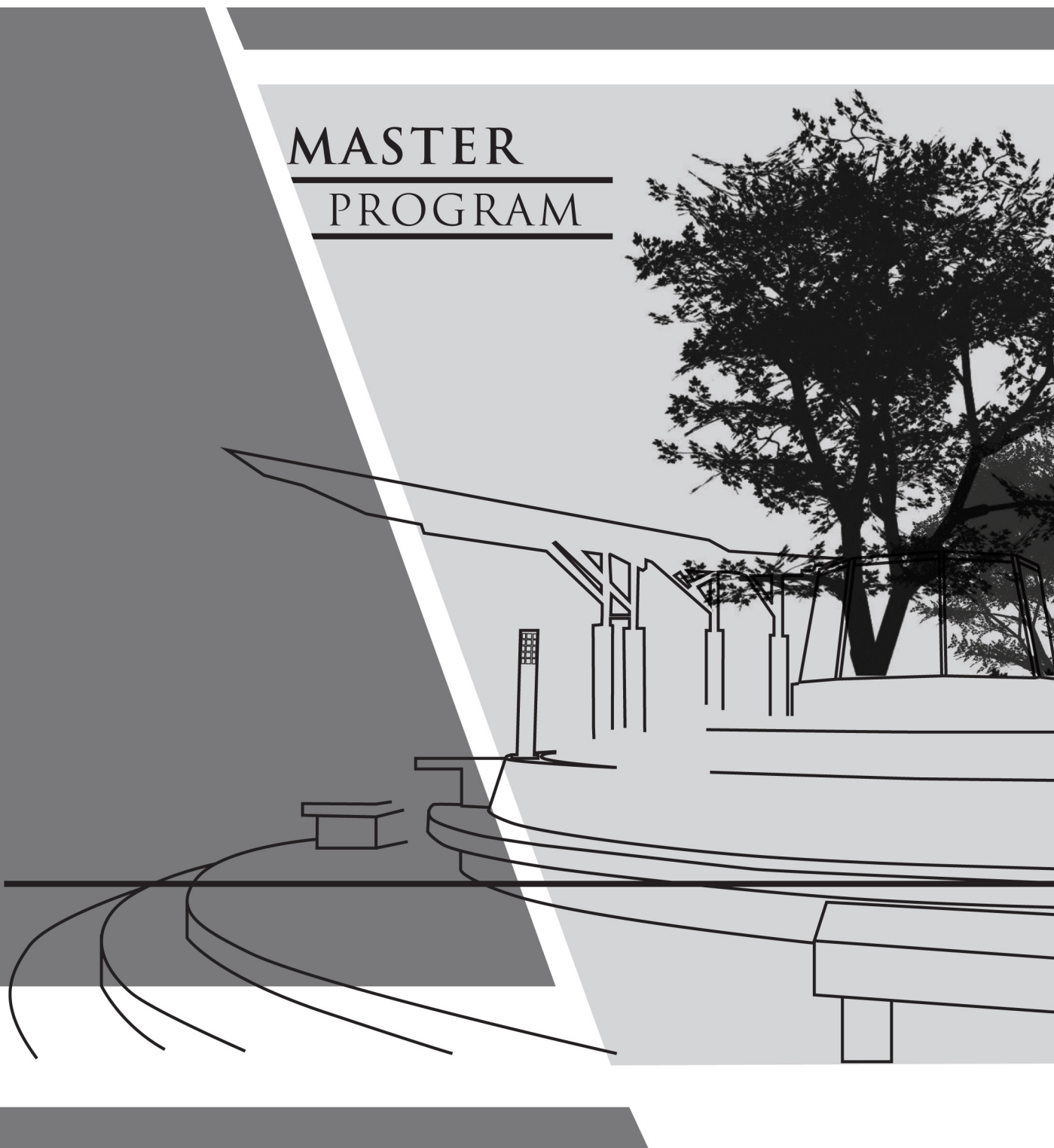
Selected topics that are relevant to the mastery of professional architecture competence and the development of architecture knowledge

Prerequisite: -

References: Relevant references to the topic offered.



MASTER PROGRAM



6.5. MASTER PROGRAM IN ARCHITECTURE

Program Specification

1	Awarding Institution		Universitas Indonesia
2	Teaching Instituion		Universitas Indonesia
3	Program		Master Program in Architecture
4	Class		Regular
5	Degree Offered		Magister Arsitektur (M.Ars)
6	Accreditation / Recognition		A Accredited from BAN PT; AUN-QA
7	Language of Instruction		Bahasa Indonesia and English
8	Study Scheme (Full time/Part time)		Full time
9	Entry requirement		S1 Graduate/equivalent
10	Duration of Study		2 years-Program
	Type of Semester	Number of semester	Number of weeks /semester
	Regular	8	17
	Short (optional)		
11	Graduates profile: Magister Arsitektur is a graduate who achieve mastery of architectural knowledge within their fields and demonstrate the novelty and state of the art in research and innovation in research and design methods.		
12	Graduates Competence: 1. Able to construct advanced architectural knowledge within particular fields. 2. Able to manage independent research in architecture within particular fields. 3. Able to synthesize and integrate knowledge and methods to reveal architectural phenomena and to solve architectural design problems. 4. Able to demonstrate critical attitude in individual position in relation to other people and as a part of the society, through attitudes and thinking skills that support successful contribution in the society, teamwork and responsive acts toward the surrounding environment.		

13	Course Composition		
No	Type of Courses	Credits	Percentage
i	Architecture Subjects	13	32.5%
ii	Fields Subjects	13	32.5%
iii	Electives	6	15%
iv	Thesis	8	20%
	Total	40	100 %
14	Total Credits for Graduation		40 credits

Job Opportunity

Job opportunities to the alumnus of Master of Architecture program are: architecture practitioner, academican, researcher, government consultant, businessmen, and actuator in humanities environment sector.



COURSE STRUCTURE MASTER PROGRAM ARCHITECTURE

Kode	Subjects	Peminatan					
		AD	UD	UHS	P	ATH	AS
Semester 1							
ENAR801001	Advanced Design and Research Methods	4	4	4	4	4	4
ENAR801002	Advanced Architectural Theories	3	3	3	3	3	3
ENAR801106	Architectural Design Studio 1	5					
ENAR801209	Urban Design Studio 1		5				
ENAR801312	Urban Housing & Settlement Studio 1 1			5			
ENAR801415	Property Workshop 1				5		
ENAR801518	History & Theory Workshop 1					5	
ENAR801621	Arch & Sustainability Workshop 1						5
	Sub Total	12	12	12	12	12	12
Semester 2							
ENAR802107	Architectural Design Theories	3					
ENAR802210	Urban Design Theories		3				
ENAR802313	Urban Housing & Settlement Theories			3			
ENAR802416	Property Theories				3		
ENAR802519	Architectural Theory and History					3	
ENAR802622	Architecture & Sustainability Theory						3
ENAR802108	Architectural Design Studio 2	5					
ENAR802211	Urban Design Studio 2		5				
ENAR802314	Urban Housing & Settlement Studio 2			5			
ENAR802417	Property Workshop 2				5		
ENAR802520	History & Theory Workshop 2					5	
ENAR802623	Arch & Sustainability Workshop 2						5
	Elective	3	3	3	3	3	3
	Sub Total	11	11	11	11	11	11
Semester 3							
ENAR800003	Pre-Thesis	4	4	4	4	4	4
	Elective	3	3	3	3	3	3
	Sub Total	7	7	7	7	7	7
Semester 4							
ENAR800004	Scientific Publication	2	2	2	2	2	2
ENAR800005	Thesis	8	8	8	8	8	8
	Sub Total	10	10	10	10	10	10
	Total	40	40	40	40	40	40

Bidang Peminatan - Stream:

- AD = Architectural Design (Perancangan Arsitektur)
 UD = Urban Design (Perancangan Perkotaan)
 UHS = Urban Housing and Settlement (Perumahan dan Permukiman Perkotaan)
 P = Property (Properti)
 ATH = Architectural Theory and History (Teori dan Sejarah Arsitektur)
 AS = Architecture and Sustainability (Arsitektur dan Sustainabilitas)



Resume

Wajib Program Studi	21
Peminatan	13
Jumlah	34
Pilihan	6
Total Beban Studi	40

ELECTIVES

Code		Credit
ENAR800524	Ethnic Architecture	3
ENAR800525	Architecture & Cinematic Space	3
ENAR800526	Architecture and Text	3
ENAR800327	Coastal Architecture	3
ENAR800228	Architecture, City, and Power	3
ENAR800529	Heritage Architecture	3
ENAR800630	Energy-Saving Building	3
ENAR800131	Desain Komputasi	3
ENAR800632	High-Rise Building Facades	3
ENAR800133	Geometry and Architecture	3
ENAR800334	Housing Policy	3
ENAR800135	Everyday and Architecture	3
ENAR800636	Project Management	3
ENAR800337	Understanding Phenomenon: Plato to Derrida	3
ENAR800238	Perencanaan Kota	3
ENAR800039	Independent Study	3
ENAR800040	Capita Selecta	3
ENAR800041	Topic on Architectural Design	3
ENAR800042	Topic on Urban Design	3
ENAR800043	Topic on Urban Housing and Settlement	3
ENAR800044	Special Topic on Property	3
ENAR800045	Topic on Arch History, Theory & Critics	3
ENAR800046	Special Topic on Sustainability	3
ENAR800047	Teaching Assistantship	3

CURRICULUM STRUCTURE FOR FAST TRACK PROGRAM

COURSE	CREDIT	COURSE	CREDIT
Semester 7		Semester 1	
Mata Ajar Pilihan S1: Metode Perancangan Lanjut dan Penelitian	4	Mata Ajar Wajib S2: Metode Perancangan Lanjut dan Penelitian	4



Mata Ajar Pilihan S1: Teori Arsitektur Lanjut	3	Mata Ajar Wajib S2: Teori Arsitektur Lanjut	3
Mata Ajar Pilihan S1			
(diambil dari Mata Ajar Pilihan S2)	3	Mata Ajar Pilihan S2	3
		Sub Total	10
Semester 8		Semester 2	
Mata Ajar Pilihan S1: Teori Kekhususan	3	Mata Ajar Wajib S2: Teori Kekhususan	3
Mata Ajar Pilihan S1 (diambil dari Mata Ajar Pilihan S2)	3	Mata Ajar Pilihan S2	3
		Studio/Workshop Kekhususan 2	5
		Sub Total	11
		Semester 3	
		Studio/Workshop Kekhususan 1	5
		Pra-Tesis	4
		Sub Total	9
		Semester 4	
		Tesis	8
		Publikasi Ilmiah	2
		Sub Total	10
Total sks Transfer Kredit	16 (40%)	Total sks S2	40



COURSE DESCRIPTION (COMPULSORY COURSES)

ENAR801001

ADVANCED DESIGN AND RESEARCH METHODS

4 CREDITS

Learning Objectives:

Student should be able to explore the theory and design method that earns many critics' attention in architecture and design world. Student can choose appropriate design approach for good architectural research which related to architecture design research, urban design, urban housing and settlement, history and theory, property and building technology

Syllabus:

Research method: architectural thinking and research; terminology (ontological, psychological); architectural text and language style; research questions; research arguments; research logic; assumption and paradigm; research strategy and tactics; research proposal making.
Advanced design method: Design research, relation between research and design; thesis statement; architecture arguments' form; exploration of design theory and method that are argued by professional critics in architecture and design world.

Pre-requisites:

None for Architecture Master's Program student. By permission for Architecture Undergraduate student.

References:

1. J.M. Bochenski, *The Methods of Contemporary Thoughts*, , Harper Torchbook, 1968
2. G. Broadbent, *Design in Architecture: Architecture and the Human Sciences*, David Fulton Publisher, 2000;
3. Sir Karl Popper, *The Logic of Scientific Discovery*, Routledge Classic, 2002
4. T. Y.Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur, 2005
5. F. Crews, *The Random House Handbook*, 3rd ed, Random House, 1980
6. Edward Tufte, *Envisioning Information*, Graphics Press, 1983
7. John Zeisel, *Inquiry by Design: Environment/Behavior/Neuroscience in Architecture, Interiors, Landscape, and Planning*, W. W. Norton, 2006
8. Linda Groat & David Wang, *Architectural Research Methods*, John Wiley & Sons, 2002
9. Murray Fraser (Ed). *Design Research in Architecture*, Routledge, 2013
10. Philip Plowright, *Revealing Architectural Design: Methods, Frameworks, Tools*, Routledge, 2014
11. Bryan Lawson, *How Designers Think: The Design Process Desmystified*, Architectural Press, 2005
12. Hazel Clark dan David Brody (eds), *Design Studies: A Reader*, Berg, 2009.
13. Nigel Cross, *Designerly Ways of Knowing*, Birkhauser, 2007

ENAR801002

ADVANCED ARCHITECTURAL THEORIES

5 CREDITS

Learning Objectives:

Students are introduced to advanced architectural theories in general and provides the basic of research for each field, which include advanced architectural design (creative process); architecture and humanities, and architecture and technology (especially sustainability). The focus remains on the architectural phenomenon - aspects of space, place and form/shape; in a scale from private spaces to urban areas.

Syllabus:

Architecture as a discipline: space, place/non-place (topia, utopia, heterotopia, dystopia); Architectural form, design thinking and process (positivism, rationalism, tame/wicked problem, IBIS, pattern language, diagram);
Architecture and property development (real estate);
Socio-cultural aspects in architecture: historiography, evolution/ history of human settlement (human life-cycle space, culture and the politics of space);



Architecture and sustainability: building physics, construction and technology.

Pre-requisites: -

References:

1. -----, *The Appraisal of Real Estate 13th edition*, Appraisal Institute, 2008
2. Christopher Alexander, *Notes on the Synthesis of Form*, Harvard University Press Publication, 1964
3. Andrew Ballantyne (ed.), *Architecture Theory, A Reader in Philosophy and Culture*, Continuum, 2005
4. S Bell et.al. *Sustainability Indicators: Measuring the Immeasurable?*, Earthscan Publications Ltd, 2000
5. A Bertaud, *The Regulatory Environment of Urban Land in Indonesia: Constraints Imposed on the Poor and Impact of World Bank's Urban Projects*, Asia Technical Department, 2003
6. Ricky Burdett eds, *Living in the Endless City: The Urban Age Project by the London School of Economics and Deutsche Bank's Alfred Herrhausen Society*, Paidhon, 2011
7. Stephen Cairns, Greig C Crysler, and Hilde Heynen, *The SAGE Handbook of Architectural Theory*, Sage Publication, 2012
8. Adrian Forty, *Words and Buildings, A Vocabulary of Modern Architecture*, Thames and Hudson, 2000
9. Bernd Evers and Christof Thoenes (eds), *Architectural Theory from the Renaissance to the Present*, Taschen, 2003
10. Michael K Hays, *Architecture Theory since 1968*, MIT Press, 1998
11. Triatno Y Hardjoko, *Urban Kampung. Its Genesis and Transformation into Metropolis, with particular reference to Penggilingan in Jakarta*, VDM, 2009
12. Charles Jencks (eds.), *Theories and Manifestoes*, Academy Editions, 1997
13. Keith Jenkins, *Re-thinking History*, Routledge, 1991
14. Paul Alan Johnson, *The Theory of Architecture: Concepts, Themes & Practices*, Van Nostrand Reinhold, 1994
15. Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to The Present*, Princeton Architectural Press, 1994
16. M Larice and E McDonald (eds), *Urban Design Reader*, Routledge, 2006
17. Henri Lefebvre translated by Donald Nicholson-Smith, *The Production of Space*, Blackwell, 1991
18. Miko E Miles, Gayle Berens, and Marc A Weiss, *Real Estate Development*, Urban Land Institute, edisi terakhir
19. M Mostavi et al (eds.), *Ecological Urbanism*, Lars Muller Publisher, 2010
20. Kate Nesbitt (Ed), *Theorizing, A New Agenda for Architecture, An Anthology of Architectural Theory*, Princeton Architectural Press, 1996
21. Jean-Pierre Protzen and David J Harris, *The Universe of Design: Horst Rittel's Theories of Design and Planning*, Routledge, 2010
22. W Rutz, *Cities and Towns in Indonesia: Their Development, Current Positions and Functions with Regard to Administration and Regional Economy*, Gebrünger Borttraeger, 1987
23. Christian Norberg Schulz, *Intentions in Architecture*, MIT Press, 1968
24. D G Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory*, Academy Press, 2005
25. James D Shilling, *Real Estate*, Oncourse Learning, 2001
26. D'Arcy Thompson, *On Growth and Form*, Cambridge University Press, 1987

ENAR801106
ARCHITECTURAL DESIGN STUDIO 1
5 CREDITS

Learning Objectives:

Students should be able to explore and develop arguments for architectural design concepts based on research and design method in urban context.

Syllabus:

The development of logical argument based on design research, method and design in the studio related to design concept, issue, keywords, design theory, and program on urban context based on specific idea. Data collection is based on specific parameters externally and internally which define certain form. Identification of issues that are related to environmental sustainability and tropical climate context, and formulation of program as spatial journey. Tectonic aspects cover



form, structure, and building system. The knowledge on design based on typology and topology. The consideration on safety and health aspects. The mastery on architectural expression includes model, sketches, architectural drawings, and digital media.

Pre-requisites: -

Buku Ajar:

1. Christopher Alexander, *A Pattern Language*, Oxford University Press, 1977
2. Peter Eisenman, *Diagram Diaries*, Thames & Hudson, 1999
3. William McDonough and Michael Braungart, *The UpCycle: Beyond Sustainability - Designing for Abundance*, Melcher Media: A Northpoint Press, 2013
4. Jean-Michel Kantor, "A Tale of Two Bridges: Topology and Architecture" in *Nexus Network Journal*, Volume 7, Issue 2, November 2005, pp 13-21
5. Works and thoughts of Zaha Hadid, Frank Gehry, Rem Koolhaas, Bernard Tschumi, Stephen Holl, Bjarke Ingels, Julien De Smedt, etc.

ENAR801209

URBAN DESIGN STUDIO 1

5 CREDITS

Learning Objectives:

Students should be able to understand the basic of analysis and have the skills to apply urban design regulation gradually, from urban elements to urban guidelines until certain scale, with a strip or a mixed use environment as the object of study. Students should also be able to understand the basic of urban design application using in-depth analysis and to demonstrate critical understanding of environmental contexts and issues.

Syllabus:

The chosen site is a strip or complex environment that has variety of city elements that could give opportunity for students to do multiple analysis. To understand and apply the idea of place making in private nor public area, open space nor building, to materialize individual needs nor community/public. To critically reviewing in wider scale and context in various plans and city regulation including master plan, zoning, UDGL, etc.

Pre-requisites: -

References:

1. Carmona, Matthew et.al, *Public Spaces Urban Spaces*. Oxford: Architectural Press, 2003
2. Gehl, Jan, *How to Study Public Life*, Copenhagen: Island Press, 2013
3. Hester, Randolph T., *Design for Ecological Democracy*, Cambridge, MA: The MIT Press, 2010
4. Shane, Graham, *Recombinant Urbanism*. Great Britain: John Willeys & Sons, 2005
5. Jacobs, Allan B., *Looking at Cities*. Cambridge, MA: Harvard University Press, 1985
6. Krier, Rob, *Urban Space*. New York: Rizzoli Int. Publication, 1970
7. Lynch, Kevin, *Good City Form*. Cambridge, MA: MIT Press., 1984
8. Larice, Michael, *Urban Design Reader*, London: Routledge, 2012
9. National Association of City Transportation Officials, *Urban Street Design Guide*, Copenhagen: Island Press, 2013
10. Rossi, Aldo, *The Architecture of the City*. Cambridge, MA: MIT Press, 1982

ENAR801312

URBAN HOUSING AND SETTLEMENT STUDIO 1

5 CREDITS

Learning Objectives:

Students should be able to design housing project based on market mechanism; design program including market potential research, market economy, location, and types of housing.

Syllabus:

The potential housing project covers market demand, housing economy; Design process covers precedent literature based on overseas and local resources; design development; housing project model; design report including housing economy, technical design including model/maquette from housing project.



Prerequisites: -

References:

1. C A Doxiades, *Ekistics: An Introduction to the Science of Human Settlements*, Oxford University Press, 1968
2. John Macsai F.A.I.A. et. al., *Housing*, John Wiley & Sons, 1982.
3. Jörg Blume (ed.), *Housing for the Future: Projects in Germany 1996*, Inter -Nations, 1996
4. Direktorat Jenderal Cipta Karya, Dep. PU, *Pedoman Teknik Perencanaan Perumahan Flat dan Maisonette*, 1981
5. DC Corporate Documentation, *Real Estate Investment Calculations*
6. The Dewberry Companies, *Land Development: Planning, Engineering and Surveying*, McGraw-Hill, 2004
7. Joshua Kahr and Michael C. Thomsett, *Real Estate Market Valuation and Analysis*. John Wiley & Sons, 2005

ENAR801415

**PROPERTY WORKSHOP 1
5 CREDITS**

Learning Objectives:

Students should be able to learn the relation between architecture and real estate activate in a small scale project. Relating to the place innovation for human activity like new building type, lifestyle, market segmentation, et cetera.

Syllabus:

The dream & the product; the products (precedence): residential property, commercial/ retail property, office building/ property for working; money matters/ feasibility study; the products & the users/ lifestyle; management aspects of a property product; The proposed products (future): residential property, commercial/ retail property, office building/ property for working; finance & management.

Prerequisites: -

References: -

ENAR801518

**HISTORY AND THEORY WORKSHOP 1
5 CREDITS**

Learning objectives:

Students should be able to master research in history which are related to historiography and architectural artifact.

Syllabus:

Architectural Historiography: use various methodologies to create architectural historiography; Artifact: Heritage of architecture and cities; introducing city/architecture heritage as significant artifact to be documented.

Prerequisites: -

References:

1. Iain Borden and David Dunster (eds), *Architecture and the Sites of History: Interpretations of Buildings and Cities*, Butterworth Architecture, 1995
2. E H Carr, *What is History?*, Penguin Books, 1961
3. Keith Jenkins, *Rethinking History*, Routledge, 1991
4. Hayden White, *Tropics of Discourse: Essays in Cultural Criticism*, The Johns Hopkins University Press, 1978
5. Hayden White, "The Burden of History", *History and Theory*, Vol. 5, No. 2, 1966 pp. 111-134
6. Mona Lohanda (ed), *Arsip dan Sejarah*, ANRI, 1980
7. G W F Hegel tr. J. B. Baillie, *Phenomenology of Mind*, 1910; 2nd ed. 1931
8. G W F Hegel tr. A. V. Miller, *Hegel's Phenomenology of Spirit*, Oxford University Press, 1977



ENAR801621
ARCHITECTURE AND SUSTAINABILITY WORKSHOP 1
5 CREDITS

Learning Objectives:

Students should be able to develop and apply building technology theory in a small scale design project research.

Syllabus:

Thermal comfort measurement and passive cooling, design and evaluation of natural lighting, noise controlling and evaluation method, planning of using alternative energy.

Prerequisites: -

References:

1. Dominique Gauzin-Muller, *Sustainable Architecture and Urbanism*, Birkhauser, 2002
2. Earl R. Babbie, *The Practice of Social Research*, Belmont: Wadsworth Publ. Co.Inc, 1973
3. Giancoli DC. *General Physics*, Prentice Hall Inc, 1984
4. James Ambrose, *Simplified Design for Building Sound Control*, John Wiley & Sons, 1995
5. Leslie L Doelle and Lea Prasetyo, *Akustik Lingkungan*, Erlangga, 1993
6. KE Watt, *Understanding the Environment*, UC Press, 1982
7. SFPE Handbook, *Society of Fire Protection Engineering*.

ENAR802107
ARCHITECTURAL DESIGN THEORIES
3 CREDIT HOURS

Learning Objectives:

Students should be able to understand and have the ability to do critical analysis to architectural ideas in classic and contemporary architecture, and also able to find the relation between discourses of theory and practice in architectural design.

Syllabus:

The development architecture shaping mechanism since classic architecture to contemporary; recent ideas in the discourses of architecture design theory and practice discourses; ideal ideas in architecture; multi-discipline approach (art, mathematics, science, and social) in architecture theory and design.

Prerequisites:

Students have taken Advanced Architectural Theories

References:

1. Stephen Cairns, Greig C Crysler, Hilde Heynen. *The SAGE Handbook of Architectural Theory*. SAGE Publications, 2012.
2. Michael Hays, *Architecture Theory since 1968*, MIT Press, 1998.
3. Kate Nesbitt, *Theorizing a New Agenda of Architecture: An Antology of Architectural Theory 1965-1995*. Princeton Architectural Press, 1996.
4. Charles Jenks & Karl Kropf, *Theories and Manifestos of Contemporary Architecture*. John Wiley and Sons, 1997.
5. Vitruvius. *The Ten Books on Architecture*, trans by M. H. Morgan. New York: Dover Publications, 1960.
6. D'Arcy Thompson, *On Growth and Form*. 1961.
7. Aaron Betsky & Erik Adigard, *Architecture Must Burn*. Gingko Press, 2000.
8. A+P Smithson. Irene Scalbert, *Towards a Formless Architecture: The House of the Future*, 1999.

ENAR802210
URBAN DESIGN THEORIES
3 CREDIT HOURS

Learning Objectives:

Students should be able to explain how planning built environment design have contribution in

shaping better cities through urban design theory analysis, including traditional and contemporary, also analysis on how in certain situation urban design is formulated; questioning how urban design ideas could elevate physical character of built-environment and why the idea is expected to facilitate the enhancement of urban lifestyle in cities; to do social and spatial analysis from targeted environment; analysis and critic to perceptual and performative of urban design.

Syllabus:

Review to understanding of urban design. Historical research and discourses on the meaning “good city” through the view of theorists, for example: cosmological belief, formalist, fungsionalists, picturesque, organics, utopians, livability, ecological. Questioning “performance dimension” in urban design theories and understanding the relation between urban design and perceptual/visual/social dimension. After the students are introduced to theorists point of view, in this section they will explore various ways of interpreting and understanding urban environment. Discussion on how urban environment has different meaning to different people, based on their cultural, economy, race, and gender background. Short review on connection between urban design activity and politic-economy context from urban development process.

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. R. Legates, *The City Reader*, 2nd ed, Routledge, 1999
2. Henri Pirenne, *The Medieval Cities: Their Origins and the Revival of Trade*, Princeton University Press, 1969
3. Aristoteles, *The Politics* (especially Book III and Book VII), Penguin Classics, revised edition, 1981

ENAR802313

URBAN HOUSING AND SETTLEMENT THEORIES 3 CREDIT HOURS

Learning Objectives:

Students should be able to have critical understanding on urban housing and settlement in developing countries. Especially Indonesia; understanding on public and private policy affecting economy and housing development, especially local economy; Giving review and critic on strategy and policy to low-income or poor society in cities.

Syllabus:

Settlement and urban housing in Indonesia; group communication problem: knowledge-power-space; daily life of urban communities; urban architecture and also the habitus of various groups in society in urban; individual housing career, family in accessing housing facilities in cities; ‘slump’ urban settlement and social-economy and politic network; housing financing; housing policy: provider vs enabler, critical analysis on Indonesia as archipelago country in relation of settlement and development in coast area.

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. A T Alamsyah, *Regionisme dalam Penataan Permukiman di Gugus Pulau Mikro*, Disertasi, PSIL UI, 2006
2. P Bourdieu, *Outline of A Theory of Practice*, Cambridge University Press, 1977, pp. 72-95
3. Rod Burgess, *Petty Commodity Housing or Dweller Control?: A Critic of John Turner View on Housing Policy*, 1978
4. Michel De Certeau tr by Steven F. Rendall, *The Practice of Everyday Life*, University of California Press, 1984, pp. 29-42 and 91-110
5. M Foucault, ‘Space. Power and knowledge,’ S. During (ed.), *The Cultural Studies Reader Second Edition*, Routledge, 1999, pp. 134-41
6. A Giddens, *The Constitution of Society*, University of California Press, 1984, pp. 1-28
7. A Gilbert and Ann Varley, *Landlord and Tenant Housing the Poor in Urban Mexico*, Routledge, 1991, chapter 7&8
8. M Haan & Thomas Perks, ‘The Housing Careers of Older Canadians: An Investigation Using Cycle 16 of the General Social Survey,’ Canadian Studies in Population Vol. 35.2, 2008, pp. 223-242
9. T Y Harjoko, *Penggusuran or Eviction in Jakarta: Solution Lacking of Resolution for Urban Kampung*, E-Proceedings, <http://coombs.anu.edu.au/SpecialProj/ASAA/biennial->



- conference/2004/Harjoko-T-ASAA2004.pdf, 18.02.2013
10. M Heidegger tr by Albert Hofstadler, *Kerper & Row, Poetry, Language, Thought*, Publishing Inc., 1971, pp. 145-161
 11. H L Kendig, 'Housing Careers, Life Cycle and Residential Mobility : Implications for the HousingMarket', *Urban Studies*, 1984, pp. 21, 271-283
 12. Shilpa Ranade, "The Way She Moves, Mapping the Everyday Production of Gender and Space in Mumbai", *Economic and Political Weekly*, Vol. 42, No. 17, Apr. 28 - May 4 2007, pp. 1519-1526
 13. B Sullivan & Ke Chen, 'Design for Tenant Fitout: A Critical Review of Public Housing Flat Design in Hong Kong', *Habitat Intl.* Vol 21. No 3, 1997, pp. 291-303
 14. John F.C Turner, *Housing By People: Towards Autonomy in Building Environments*, Marion Boyars Publishers Ltd, 2000, pp 53-74
 15. K D Willis, *Squatter Settlements*, Elsevier Ltd, 2009

ENAR802416
PROPERTY THEORIES 1
3 CREDIT HOURS

Learning Objectives:

This course is designed to develop students' insight and knowledge in: understanding roles that are related to real estate development with wide-range spatial environment aspect; mastering methods and ability to apply it to various things related to wider issue and problems in real estate.

Syllabus:

First section will elaborate the basics and concept of appraisal/valuation. Second section will cover the environment development issues that are connected to urban management. In the next sections, students will learn variety of issues related to environment development, which is fundamental construction, and cost and benefit analysis, which are risk management technique, funding resources and taxation, market and marketing, asset/property management. Learning is emphasized on understanding the rules and concept in Real Estate in urban context without neglecting method and technical calculation. Through the particular approach, students are expected to understand the development of Real Estate as a concept that could be used to help variety of problems that will be faced in workplace.

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. Michael Ball et.al, *The Economics of Commercial Property Markets*, Routledge, 1998
2. Sheman J Maisel, *Real Estate Investment and Finance*, McGraw-Hill, Inc., 1976
3. Hugh O. Nourse, *Managerial Real Estate Corporate Real Estate Asset Management*, Prentice Hall, 1990
4. Mark W. Patterson, *Real Estate Portfolios*, John Willey & Sons, Inc, 1995

ENAR802519
ARCHITECTURAL THEORY AND HISTORY
3 CREDIT HOURS

Learning Objectives:

Students will be introduced to theories related to world historiography, and historical ideas to test theoretical and historical aspects in individual research.

Syllabus:

Phenomenology, semiology (structuralism, post-structuralism, deconstruction), modern and post-modern, colonialism and post-colonialism, Gender in Architecture

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. Andrew Ballantyne (ed.), *Architecture Theory, A Reader in Philosophy and Culture*, Continuum, 2005
2. Homi K Bhabha, *The Location of Culture*, Routledge, 1994
3. Iain Borden, Barbara Penner; Jane Rendell, (Eds), *Gender Space Architecture: An Interdisciplinary Introduction (Archi- text)*, Routledge, 2000



4. Zeynep Celik, *Displaying The Orient: Architecture of Islam at Nine-teenth-Century World's Fairs*, University of California Press, 1992
5. Guy Debord translated by Donald Nicholson Smith, *The Society of the Spectacle*, Black & Red, 2004
6. M. Foucault, *The Archeology of Knowledge*, Vintage, 1982, Parts II & III
7. Terence Hawke, *Structuralism and Semiotics*, Routledge, 1997
8. Steven Holl, Juhani Pallasmaa, Alberto Perez-Gomez, *Questions of Perception: Phenomenology of Architecture*, William K Stout Pub, 2007
9. Keith Jenkins, *Re-thinking History*, Routledge, 1991
10. Neil Leach (ed.), *Rethinking Architecture: A Reader in Cultural Theory*, Routledge, 1998
11. Edward Said, *Orientalism*, Penguin, 1977
12. Panayotis Tournikiotis, *The Historiography of Modern Architecture*, The MIT Press, 1999

ENAR802622**ARCHITECTURE AND SUSTAINABILITY THEORY****5 CREDIT HOURS****Learning Objectives:**

Students should be able to explain building technology theory, especially in the field of material, structure, building/environment safety.

Syllabus:

Structural material characteristics, building structure and robustness, sustainable development, ecology, building economy, advanced engineering, management aspect in building design and maintenance, energy conservation, law and regulation on built environment.

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. Edward Allen, *Fundamentals of Building Construction: Material and Methods*, John Wiley and Sons, 1999
2. James Ambrose, *Simplified Design of Masonry Structures*, John Wiley and Sons, 1992
3. Wolfgang Schuller, *High Rise Building Structure*, Krieger Publishing Co, 1986
4. Benjamin Stein, *Building Technology: Mechanical and Electrical Systems*, John Wiley and Sons, 1995
5. DS Barrie, *Professional Construction Management*, Mc.Graw-Hill, 1986
6. J.M Boschenski, *The Methods of Contemporary Thought*, Herper and Row, 1968
7. Graham Haughton, et.al, *Sustainable Cities*, Cromwell Press, 1995
8. D. Chiras et.al, *Environmental Science: A Framework for Decision Making*, Cummings Publishing, 1985
9. Sears-Salinger, *Thermodynamics, Kinetic Theory and Statistical Thermodynamics*, Wesley, 1975

ENAR802108**ARCHITECTURAL DESIGN STUDIO 2****5 CREDIT HOURS****Learning Objectives:**

Students should be able to develop the ability in creating space as architectural design concept that is defined individually in a specific design theme, which includes the consideration environment and sustainability.

Syllabus:

Exploration on design concept based on typology. Exploration on sustainable idea in various contexts. Urban space typology, building typology, program and site analysis. Theme and spatial ideas in ecological concept. Architectural research: translating program in conceptual diagram, layout, circulation, space integration by sketches, architectural drawings, and models. Tectonic exploration: relation between tectonic theme and architectural typology which relates to design concept. Verbal and visual communication aspects.

Prerequisites: -

References:

1. Dominique Hes, Chrisna Du Plessis, *Designing for Hope: Pathways to Regenerative Sus-*



- tainability, Routledge, 2014
2. Danilo Palazzo, Frederick Steiner, *Urban Ecological Design: A Process for Regenerative Places*, Island Press, 2012
3. S. Hernandez, C. A. Brebbia, W. P. De Wilde, editors, *Eco-Architecture III: Harmonisation between Architecture and Nature*, WIT Press, 2010
4. Manuel Castells, "Space of Flows, Space of Places, Materials for a City of Urbanism in the Information Age.", 2004
5. Jiat-Hwee Chang, "Tropical Variants of Sustainable Architecture: A Postcolonial Perspective," in *The SAGE Handbook of Architectural Theory*, SAGE Publications, Ltd, 2012, pp 602-617
6. Fabiano Lemes de Oliveira, "Eco-cities: The Role of Networks of Green and Blue Spaces" Cities for Smart Environmental and Energy Futures, part of the series Energy Systems, 2013, pp 165-178
7. Michael Lindfield and Florian Steinberg, *Green Cities*. Asian Development Bank (ADB) Urban Development Series, November 2012

ENAR802211

URBAN DESIGN STUDIO 2

5 CREDIT HOURS

Learning Objectives:

By taking the benefit of UI Depok campus location that is close to capital city, the main goal in the studio is to expand students' insight, understanding, knowledge, mastery to sustainable urban design principals, by taking case study in Jakarta and also Bodetabek. Students are encouraged to explore the complexity of city problems which are faced by Jakarta as megacity, in example density, urbanization, flood, energy, and climate change. In expectation, those issues will be able to spark students' creativity to provide innovative urban design that's also responsible scientifically, from the social aspects and also environment.

Syllabus:

As the continuity in Urban Design Studio 1, in this studio students are asked to do connectivity exploration on various aspects in urban design through re-design project in mixed-use area (commercial housing). Students are encouraged to re-design environment that are in the process of transition because of radical changes. Studio is organized with early premises that public space plays a significant role to create a comfortable city and life, but the design platform should also rely on user aspiration. The challenge in this studio is the position of urban design that has to give rewards and attention to other aspects in architectural way and also physical reality of a city. Other than that, in finishing urban design project, the students are challenged to make 'local character' as keyword.

Prerequisites: Students have taken Urban Design Studio 1

References:

1. Protzen, Jean-Pierre and Harris, David J., *Universe of Design: Horst Rittel's Theories of Design and Planning*, London and New York: Routledge (2010)
2. Rutz, Werner: *Cities and Towns in Indonesia*, Stuttgart: Gebruder Borntraeger (1987)
3. [Ricky Burdett](#) (Editor), [Deyan Sudjic](#) (Editor), 2010, *Living in the Endless City: The Urban Age Project by the London School of Economics and Deutsche Bank's*, Alfred Herrhausen Society, Phaidon Press
4. Ricky Burdett (Editor), Deyan Sudjic (Editor) 2008. *the Endless City*, Phaidon Press
5. Mohsen Mostafavi (Author), Gareth Doherty (Author), 2010, Harvard University Graduate, *Ecological Urbanism*, Lars Muller Publishers
6. Charles Montgomery (2014). *Happy City: Transforming Our Lives Through Urban Design*, Farrar Straus Giroux
7. Abeyasekere, S. (1987). *Jakarta: A History*, Oxford: Oxford University Press.
8. Certeau, M.D. (1984). *The Practice of Everyday Life*. Berkeley: University of California Press.
9. Silver, C. (2011). *Planning the Megacity: Jakarta in the Twentieth Century*. New York: Routledge
10. Tunas, D. (2008). *The Spatial Economy in the Urban Informal Settlement*. Netherland: International Forum on Urbanism

ENAR802314

URBAN HOUSING AND SETTLEMENT STUDIO 2

5 CREDIT HOURS



Learning Objectives:

Students will be faced to design solution of urban housing and settlement to low-income community with eco-architecture approach.

Syllabus:

Socio-economy problem exploration related to the complexity of housing provision for low-income urban community; housing planning and design based on ecological principal.

Prerequisites: Students have taken Urban Housing and Settlement Studio 1

References:

1. J M Bang, *Ecovillages: Practical Guide to Sustainable Communities*, New Society Publishers, 2005
2. J N Habraken, *Support: An Alternative to Mass Housing*, Prager Publishers, 1972
3. N Hamdi, *Housing Without Houses: Participation, Flexibility, Enablement*, Van Nostrand Reinhold, 1991
4. G Minke, *Building with Earth: Design and Technology of a Sustainable Architecture*, Publishers for Architecture, 2006
5. B Saini, 'Site Development and Sanitary Services', in H S Murison & J P Lea (eds.), *Housing in Third World Countries Perspectives on Policy and Practice*, The Macmillan Press, Ltd., 1979, pp 89-95
6. N Sheridan, 'Energy for the Built Environment', *op. cit.*, H S Murison & J P Lea, pp 100-110
7. Tokyo Student Session, *Sustainable Design Book*, The 2005 World Sustainable Building Conference in Tokyo, Student Session 23-29 September 2005, Tokyo, Japan
8. United Nations, *Guidebook on Biogas Development*, Energy Resource Development Series No. 21, 1980

ENAR802417**PROPERTY WORKSHOP 2****5 CREDIT HOURS****Learning Objectives:**

Students should be able to learn the connection between urban architecture and real estate activity in a big-scale project that connected to urban management, role and also public and private sector in the urban area development, reposition, and revitalization, etc.

Syllabus:

(1) Private sector/commercial development project, development of area around 50 ha. Property product (enacted physical regulations). Project funding and buying scheme: e.g. mortgage. Developers' and region government's rights and obligations (developer: on site, off site, cash payment, etc. Region government: holiday tax, incentive, public facilities, etc.). Implementation plan (rights and obligations + development's time schedule) (2) The development of urban facilities that are related to property development (public-private development): investigation/exploration on a public project through recovery chances by putting in unsure property development as the development of educational area/science center, MRT/busway/tollway, which connected to property development along the path. The creation of public facilities.

Prerequisites: Students have taken Property Workshop 1

References: -

ENAR802520**HISTORY AND THEORY WORKSHOP 2****5 CREDIT HOURS****Learning Objectives:**

Students should be able to master history research that related to representation and application/practice in architectural history.

Syllabus:

The representation of architecture: architecture as text; architecture as profession; architecture



as film; architecture as identity (race and gender); architecture as memory; architecture and disaster; application of architectural history: teaching architectural history; exhibiting architecture; architecture on television/ radio; architectural journalism.

Prerequisites: Students have taken Advanced Architectural Theories.

References:

1. Nezar AlSayyad, *Cinematic Urbanism: A History of the Modern from Reel to Real*, Routledge, 2006
2. J. Bloomer, *Architecture and the Text: the (s)cripts of Joyce and Piranesi (Theoretical Perspectives in Architecture)*, Yale University Press, 1995
3. Iain Borden, Jane Rendell, *Intersections, Architectural Histories and Critical Theories*, Routledge, 2000
4. Iain Borden, et.al (eds.), *The Unknown Cities: Contesting Architecture and Social Space*, The MIT Press, 2001
5. Iain Borden, et al. *Strangely Familiar: Narratives of Architecture in the City*, Routledge, 1996
6. Mike Davis, *Ecology of Fear: Los Angeles and the Imagination of Disaster*, Metropolitan Books, 1998
7. Nan Ellin, *Architecture of Fear*, Princeton Architectural Press, 1997
8. Murray Fraser. 'Dreams about Cities: REM and Koolhaas,' *The Oxford Review of Architecture*, vol. 2, 1997, p:76.
9. Bell hooks. *Art on My Mind; Visual Politics*, The New Press, 1995
10. Michael Keith and Steve Pile, *Place and the Politics of*, Routledge, 1993
11. Naomi Klein, *The Shock Doctrine: the Rise of Disaster Capitalism*, Metropolitan Books, 2008
12. R. Koolhaas and B. Mau, *S,M,L,XL*, Office for Metropolitan Architecture (O.M.A.), 1995
13. Spiro Kostof (ed.), *Architect*, Oxford University Press, 1977
14. Intan Paramaditha, 'City and Desire in Indonesian Cinema' in *Inter-Asia Cultural Studies: Runaway City/Leftover Spaces*, vol. 12, no: 4, Routledge T&F, 2011, pp:500-512
15. A. Palladio tr by: Robert Tavernor & Richard Schofield, *The Four Books on Architecture*, MIT Press, 1997
16. Leonie Sandercock (ed.), *Making the Invisible Visible, A Multicultural Planning History*, University of California Press, 1998
17. Moira G Simpson. *Making Representations Museum in the Post colonial Era*, Routledge, 1996
18. R. Venturi, *Complexity and Contradiction in Architecture*, The Museum of Modern Art, 1966

ENAR802623

**ARCHITECTURE AND SUSTAINABILITY WORKSHOP 2
5 CREDIT HOURS**

Learning Objectives:

Students should be able to develop and apply building technology theory in a small-scale research project.

Syllabus:

Ecological aspect in technology utilization, material utilization affects to building safety, economy aspect in technology utilization, resources engineering, resources technology management in building/design, the effects of technology utilization in design to project management, energy efficiency measurement in design, the effects of law and regulation in technology utilization.

Prerequisites: Students have taken Architecture and Sustainability Workshop 1

References:

1. James Cowan, *Architectural Acoustics: Design Guide*, McGraw-Hill, 2000
2. Frei Otto, *Tensile Structure*, MIT Press, 1997
3. Harold J. Rosen, *The Professional Practice of Architectural Detailing*, John Wiley & Sons, 1999
4. Soeryani Moh ed, *Lingkungan: Sumberdaya Alam dan Kependudukan dalam Pembangunan*, UI Press, 1987
5. Finatya Legoh dan Siti Handjarinto, *Buku Ajar Akustik*, 2002
6. Ganijanti AS, *Mekanika*, Penerbit Salemba Teknik, 2000

PRE-THESIS 3 CREDIT HOURS

Learning Objectives:

Students should be able to produce a research proposal (for research thesis) or design proposal (for design thesis) which comprises of minimum 4.000 words. Students who choose research thesis should provide a research proposal which contains findings from theoretical analysis which shows the mastery level in the investigation of issues, formulates preposition and develops research methods. Students who choose design thesis should produce a design proposal that contains theoretical analysis that shows mastery level in designing, and proposes a design statement that is ready to be followed-up and developed through design process.

Syllabus:

Formulation of research question and issues; theoretical analysis through relevant literature research; development of method to respond to design issues or to respond to research questions.

Pre-requisites:

Students have passed Advanced Design and Research Methods with minimum score B.

References:

1. I. Borden and K. Ruedi, *The Dissertation: An Architecture Students' Handbook*, Oxford University Press, 2000
2. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005
3. L. Groat & D. Wang, *Architectural Research Methods*, John Wiley and Sons, 2002
4. F. Crews, *The Random House Handbook*, 3rd ed, Random House, 1980

ENAR800004 SCIENTIFIC PUBLICATIONS 2 CREDIT HOURS

Learning Objectives:

Students should be able to produce scientific papers or research with decent quality for being published at dissemination forum in the national or international level.

Syllabus:

The principles of scientific writing; various modes of scientific writing; strategy for formulating the argument in the scientific literature that explicitly indicates the position of the existing knowledge; procedure of publication in national/international seminars/conferences; procedures of publications in international journals; review of articles in internationally reputable journals that are related to the fields of architecture

Pre-requisites:

Students have taken Advanced Design and Research Methods.

References:

1. I. Borden and K. Ruedi, *The Dissertation: An Architecture Students' Handbook*, Oxford University Press, 2000
2. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005
3. L. Groat & D. Wang, *Architectural Research Methods*, John Wiley and Sons, 2002
4. N. Gough, *Blank Spots, Blind Spots, and Methodological Questions in Postgraduate Research*, 2002

ENAR800005 THESIS 8 CREDIT HOURS

Learning Objectives:

Students should be able identify, study, and communicate issues in a specific research area which relates to architecture. Able to develop advanced mastery in reading, research, and write a thesis. For thesis research section: provide a thesis not more than 20.000 words. For design thesis section: provide the design as well as thesis not more that 10.000 words and design portfolio that gives the



whole picture on design research process.

Syllabus:

Defining issue to respond, research questions which are clearly formulated, and the objectives of the research. Theoretical based, strategy for choosing methods, investigation of facts and synthesis of materials which lead to the responses to research questions and the conclusion.

Pre-requisites: Students have passed Pre-Thesis.

References:

1. I. Borden and K. Ruedi, *The Dissertation: An Architecture Students' Handbook*, Oxford University Press, 2000
2. T. Y. Hardjoko, *Panduan Meneliti dan Menulis Ilmiah*, Departemen Arsitektur Universitas Indonesia, 2005
3. L. Groat & D. Wang, *Architectural Research Methods*, John Wiley and Sons, 2002
4. F. Crews, *The Random House Handbook*, 3rd ed, Random House, 1980

COURSE DESCRIPTION (ELECTIVES)

ENAR800524
ETHNIC ARCHITECTURE
3 CREDITS
Learning Objectives:

Student should be able to understand various aspects of architecture which arise from ethnic groups' traditions in order to explain and analyse elements and principles of architecture from particular ethnic group; able to comprehend the phenomena of ethnic architecture in general and to analyze architecture tradition of particular ethnic group.

Syllabus:

Understanding of principles and elements of ethnic architecture, forming factors, symbolic classification, cosmological view and worldview, space, place, time, meaning, anthropomorphic, building process.

Prerequisites: -**References:**

1. Amos Rapoport, *House Form and Culture*, Englewood Cliffs, 1960
2. N. Egender, *Architectural Anthropology*, Structura Mundi, 1996
3. Roxanna Waterson, *The Living House: An Anthropology of Architecture in Southeast Asia*, Oxford University Press, 1990
4. E. Guidoni, *Primitive Architecture*, Harry N. Abrams, 1978
5. Paul Oliver (ed.), *Sign, Symbol, and Shelter*, The Overlook Press, 1977
6. J. Fox (ed.), *Inside Austronesian House*, The Australian National University, 1993
7. Djauhari Sumintardja, *Kompendium Arsitektur*. Yayasan Lembaga Masalah Bangunan, 1978
8. Bourdier & N. AlSayyad (eds), *Tradition, Dwellings and Settlements: Cross-cultural Perspectives*, University Press of America, 1989

ENAR800525
ARCHITECTURE AND CINEMATIC SPACE
3 CREDITS
Learning Objectives:

Students should be able to demonstrate knowledge of modernity and post modernity urban history through the cinematic lens. Based on Indonesian context, this course also reviewing how student read and understand cities, focused on culture, society, and urban space represented on Indonesian cinema today and on 1965-1998. By considering how the real and reel city confess to each other on mutual representation practice, this course discuss about history and cinematic space interpretation through space and time, by the way of movies that represented different modernity.

Syllabus:

Modernity, Post Modernity, Globalization: The traditional small town; the industrial modern city; modernist dystopias, cynical modernity; postmodern city themes; postmodern dystopia; the voyeuristic city; the city through different eyes; social class ; the contested city/alternative modernity (race, ethnicity and urban experience); the anti city: nostalgic imaginaries; culture, passion and piety.

Prasyarat: -**References:**

1. Louis Wirth, "Urbanism as a Way of Life", in *American Journal of Sociology*, 1938, pp. 38-83
2. Georg Simmel, "The Metropolis and Mental Life", in N. Leach, ed, *Rethinking Architecture*, New York: Routledge, pp.68-79
3. John Berger, *Ways of Seeing*, London: Penguin Books, 1977.
4. S. Watson and Gibson (eds). *Postmodern Cities and Spaces*. Cambridge: Basil Blackwell, 1995.
5. Aihwa Ong & Ananya Roy, *Worlding Cities: Asian Experiment and the Art of Being Global*, Routledge.
6. Alan Marcus, Dietrich Neumann (eds), *Visualizing the City (Architext)*, Routledge, 2008
7. Wolfgang Natter, "The City as Cinematic Space: Modernism and Place in Berlin, Symphony of a City" in S. Aitken and P Zonn (eds). *Place, Power and Spectacle*. London: Rowman and



- Littlefield Publishers, 1994, pp.203-227.
8. Scott Bukatman, *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction*, Durham: Duke University Press, 1993.
9. J. Rutherford (ed). *Identity: Community, Culture, Difference*. London: Lawrence & Wishart. 1990.
10. Nezar AlSayyad, *Consuming Tradition, Manufacturing Heritage*. London: Routledge, 2001.
11. A. King (ed). *Culture, Globalization and the World System*. London: Macmillan. 1991
12. Dietrich Neumann, *Film Architecture: From Metropolis to Blade Runner*, Prestel Publishing, 1999.
13. Nezar AlSayyad, "The Cinematic City: Between Modernist Utopia and Postmodernist Dystopia" in *Built Environment* 26:4, 2000, pp.268-281.
14. Nezar AlSayyad, *Cinematic Urbanism: A History of the Modern from Reel to Real*. Routledge, 2006.
15. Katherine Shonfield, *Walls Have Feelings: Architecture, Film and the City*, London: Routledge, 2000.
16. D. Clarke (ed). *The Cinematic City*, London: Routledge, 1997.
17. F. Penz and T Thomas (eds). *Cinema and Architecture*, London: British Film Institute. 1997.
18. M. Lamster (ed). *Architecture and Film*, New York: Princeton Architectural Press, 2000.
19. M. Shiel and T. Fitzmaurice (eds), *Cinema and the City*, Oxford: Blackwell, 2001.
20. Gabriel, Teshome. *Third Cinema in the Third World: An Aesthetic Liberation*, Ann Arbor, MI: University of Michigan Press, 1983.
21. Martin Roberts, *Cinema and Nation*, London: Routledge, 2000
22. Philip Kitley, *Television, Nation and Culture in Indonesia*, Athens, OG: Ohio University Center for International Studies, 2000
23. Intan Paramadina, "City and Desire in Indonesian Cinema," *Inter-Asia Cultural Studies: Runaway Cities/Leftover Spaces*, Volume 12, Number 4, 2011
24. Ariel Heryanto, *Identity and Pleasure: The Politics of Indonesian Screen Culture*, Singapore: NUS Press, 2014
25. Krishna Sen, *Indonesian Cinema Framing New Order*, London: Zed Books, 1994
26. Bell Hooks, *Reel to Real: Race, Gender and Class at the Movies*, Routledge Classics, 2012
27. **Films selection (among others):** Cinema Paradiso; It's a Wonderful Life; Berlin: Symphony of a City; Modern Times; Metropolis; Brazil; End of Violence; Rear Window; Manhattan; Taxi Driver; Blade Runner; Do the Right Thing; My Beautiful Launderette; The Truman Show; Los Angeles Plays Itself; Drakula Mantu (1974); Jakarta Jakarta (1978); Pengemis dan Tukang Becak (1978); Matahari-Matahari (1985); Daun di Atas Bantal (1998); *Cul-de-Sac* (1998); Eliana, Eliana (2002); Arisan! (2003); Mengejar Matahari (2004); Rindu Kami Padamu (2004); Berbagi Suami (2006); Naga Bonar Jadi Dua (2007); Ayat-Ayat Cinta (2008); Perempuan Berkalung Sorban (2009); and related films as needed.

ENAR800526
ARCHITECTURE AND TEXT
3 CREDITS

Learning Objectives:

Students should be able to understand architecture as a text based on the connection between text and its context.

Syllabus:

"Il n'y a pas de hors-texte" (there is nothing outside the text) - Jacques Derrida. Text are often be understood as a written communication, but in this course, text are is not limited to the written words. For example face expressions, traffic signs and paintings are also text. "Text", the word which has connection with the word "Texture" and "Context" coming from the latin word *texere*, which means knit. As an introduction to the architecture as a text, this course gives us knowledge, how to read architectural work as text, how to read architecture as knitting between architectural work and its architect experience, society condition, etc.

Prerequisites: -

References:

1. Roland Barthes, *Mythologies*, Vintage Classics, 2000
2. John D Caputo (ed.), *Deconstruction in a Nutshell: a Conversation with Jacques Derrida*, Fordham University Press, 1997
3. Umberto Eco, *A Theory of Semiotics*, Indiana University Press, 1976
4. Joel Gilberthorpe, *What is a Text?: on the Limits of a Text as an Object of Knowledge*

(http://www.arts.mq.edu.au/documents/NEO_Article_5_2009_Joel_Gilberthorpe.pdf)

ENAR800327
COASTAL ARCHIECTURE
3 CREDITS

Learning Objectives:

Student should be able to understand the relationship between spatial temporal, cultural, and eco-athropomorphic systems changes in coastal areas. Such understanding would contribute to awareness to integrate eco-anthroposystem ideas into architectural design in coastal areas; Student should be able to systematically express their own understanding and awarenees of design issues in coastal context.

Syllabus:

Water and architecture, basic understanding and knowledge of coastal area, continental area, sea, archipelago, spatial-temporal-cultural aspects, coastal eco-anthroposystem, the effect of island-sea interactions to coastal living-livelihood, spatial planning, facilities and architecture of coastal areas, the dynamics of dwelling and dwelling form in Indonesian coastal areas, climate change and disaster risk in Indonesian coastal area, spatial-temporal-cultural changes and eco-anthroposystem in certain Indonesian coastal area, the role of architects in coastal spatial planning and the future of coastal architecture.

Prerequisites: Students have taken Design Theories & Methods in Architecture

References:

1. Abimanyu Takdir Alamsyah, *Regionisme dalam Penataan Permukiman di Gugus Pulau Mikro*, unpublished doctoral dissertation, PSIL Universitas Indonesia, 2006
2. Abimanyu Takdir Alamsyah, *Menata Permukiman Pulau-Laut, Mempertahankan Keberlanjutan Bertanahair Kepulauan*, Pidato pengukuhan Guru Besar Universitas Indonesia. Depok, 2009
3. Michael R. Bloomberg and Amanda M. Burden, *Urban Waterfront Adaptive Strategies in Waterfront Vision & Enhancement Strategy*, NYC Planning, 2013
4. Subandono Diposaptono and Budiman, *Tsunami*, Penerbit Buku Ilmiah Populer, 2006
5. Charles Moore and Jane Lidz, *Water + Architecture*, Thames and Hudson Ltd, 1994
1. Malcolm Newson, *Land, Water and Development: River Basin Systems and their Sustainable Development*, Routledge, 1992
2. Koen Olthuis and David Keuning, *Float!. Building on Water to Combat Urban Congestion and Climate Change*, Frame Publishers, 2010
3. Djoko Pramono, *Budaya Bahari*, Gramedia Pustaka Utama, 2005
4. Alan P. Trujillo and Harold V. Thurman, *Essentials of Oceanography, Ninth Edition*, Pearson Education Ltd, 2008
5. Heather Vies and Tom Spencer, *Coastal Problems: Geomorphology, Ecology and Society at the Coast*, Edward Arnold, 1995
6. Ary Wahyono, AR Patji, SS Laksono, R. Indrawasih, Sudiyono dan Surmiati Ali, *Hak Ulayat Laut di Kawasan Indonesia Timur*, Media Presindo Yogyakarta, 2000

ENAR800228
ARCHITECTURE, CITY AND POWER
3 CREDITS

Learning Objectives:

Student should be able to understand the role of architecture, planning and design within and between urban contexts; should be able to improve their understanding on the relationship between built environmental design and power; should be able to increase awareness of the intertwining relationship between architecture, social aspects, political aspects, economy, and culture; should be able to understand that built environment is conceived out of, and would yield particular power relation amongst the users in a specific context.

Syllabus:

The role of architecture and planning in the broader context. The relationship between design and power. Syllabus is prepared according to the themes related to the aforementioned relationship, which includes the following themes: Architecture and consumption, poverty and inequality; informality, disasters, theme parks/leisure, space of colonial/post-colonial/nation/globalization/



neoliberalism; spatial enclaves/zone/segregation based on gender, race and ethnicity, social class, religion, spatial justice; housing and infrastructure.

Prerequisites: -

References:

1. Benedict Anderson, *Language and Power: Exploring Political Culture in Indonesia*, Ithaca: Cornell University Press, 1990 (esp. chapter "The Idea of Power in Javanese Culture")
2. James D Faubion, *Michel Foucault: Power, Essential Works of Foucault 1954-1984*, New York: The New Press, 1997
3. Kim Dovey, *Framing Spaces: Mediating Power in Built Form*, New York: Routledge, 1999
4. Lawrence Vale, *Architecture, Power and National Identity*, Routledge, 2002 (2nd ed)
5. Abidin Kusno, *Behind the Postcolonial: Architecture, Urban Space and Political Culture in Indonesia*, Routledge, 2000
6. Abidin Kusno, *After the New Order: Space, Politics and Jakarta*, University of Hawaii Press, 2013
7. Brenda S.A Yeoh, *Contesting Space in Colonial Singapore: Power Relations and the Urban Built Environment*, Singapore University Press, 2003
8. Nezar AlSayyad (ed), *Forms of Dominance: On the Architecture and Urbanism of Colonial Enterprise*, Avebury, 1992
9. Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism*, Chicago: The University of Chicago Press, 1991
10. David Harvey, *Spaces of Hope*, University of California Press, 2000
11. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, 1998
12. James Holston, *The Modernist City: an Anthropological Critique of Brasilia*, The University of Chicago Press, 1989
13. Janice E. Perlman, *Favela: Four Decades of Living on the Edge in Rio de Janeiro*, Oxford University Press, 2010
14. Mike Davis, *Evil Paradise: Dreamworlds of Neoliberalism*, The New Press, New York, 2007
15. Nezar AlSayyad & Ananya Roy, *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia*, New York: Lexington Book, 2004
16. Rafi Segal and Eyal Weizman, *Civilian Occupation: the Politics of Israeli Architecture*, Babel and Verso, 2003
17. Teresa Caldeira, *City of Wall*, University of California Press, 2000
18. Don Mitchell, *The Right to the City: Social Justice and the Fight for Public Space*, The Guildford Press, 2003
19. Edward S. Popko, *Transition: A Photographic Documentation of a Squatter Settlement*, McGraw-Hill, 1978
20. Justin Mc Guirk, *Radical Cities: Across Latin America in Search of New Architecture*, London: Verso, 2014
21. David Harvey, *Rebel Cities: From The Right to The City to The Urban Revolution*, London: Verso, 2012
22. Marshall Berman, *All That is Solid Melt into Air: The Experience of Modernity*, New York: Penguin Books, 1982
23. Leopold Lambert, *Weaponized Architecture: The Impossibility of Innocence*, DPR-Barcelona, 2013
24. Andy Merrifield, *Metromarxism: A Marxist Tale of the City*, New York: Routledge, 2001
25. Nezar AlSayyad & Mejgan Massoumi (eds), *Fundamentalist City? Religiousity and the Re-making of Urban Space*, London: Routledge, 2011
26. Edward W. Soja, *Seeking Spatial Justice*, University of Minnesota Press, 2010
27. Faranak Mirahtab & Neema Kudva (eds), *Cities of the Global South Reader*, Routledge, 2015
28. Etienne Turpin, et.al, *Jakarta: Architecture & Adaptation*, Jakarta: Universitas Indonesia Press, 2013 (esp. chapters Introduction and sections on interviews)
29. AbdouMaliq Simone, *Jakarta Drawing the City Near*, University of Minnesota Press, 2014
30. and various movies related to themes and learning objectives

ENAR800529
HERITAGE ARCHITECTURE
3 CREDITS

Learning Objectives:

Student should be able to understand the definition and issues in heritage and conservation of architecture from the past, in particular heritage building and heritage site.



Syllabus:

Introduction to heritage architecture, including tangible and intangible aspects, Outstanding Universal Value from heritage building and heritage site. Discussion on critical issues related to heritage in architecture and city. Introduction to conservation strategies including data collection, documentation, planning, protection, development and reuse of heritage building and heritage site. Discussion on precedents of conservation in Indonesia.

Prerequisites: -**References:**

1. Bernard M Feilden, *Conservation of Historic Building*, Butterworth-Heinemann Ltd, 1994
2. *Pengantar Panduan Konservasi Bangunan Bersejarah Masa Kolonial*, Pusat Dokumentasi Arsitektur dan Badan Pelestarian Pusaka Indonesia, 2011
3. Undang-undang Republik Indonesia Nomor 11 Tahun 2010 tentang Cagar Budaya
4. Peraturan Daerah Daerah Khusus Ibukota Jakarta Nomor 9 Tahun 1999 Tentang Pelestarian dan Pemanfaatan Lingkungan dan Bangunan Cagar Budaya
5. Amorim, Luiz et. Al. 'Preserving Space'. *Proceedings 6th International Space Syntax Symposium, Istanbul*, 2007 pp. 032-01 - 032-14.
6. Jean-Paul Corten et.al, *Heritage As An Asset for Inner-City Development: An Urban Manager's Guide Book*, Ammersfoort: Cultural Heritage Agency, nai010 Publishers, 2015
7. Fernando Diez, 'Heritage', dalam Cairns, Stephen, Crysler, Greig C., Heyne, Hilde. *The SAGE Handbook of Architectural Theory*. SAGE Publications, 2012, pp 274 - 86.
8. Peter J. Larkham, 'Conflict and Conservation' in *Conservation and the City*, Routledge, 1996, pp 3 - 30.
9. Adolf SJ Heuken, *Tempat-tempat Bersejarah di Jakarta*, Cipta Loka Caraka, 1997

ENAR800630**ENERGY-SAVING BUILDING
3 CREDITS****Learning Objectives:**

Students should be understand the principle of energy-saving building technology and apply it on design.

Syllabus:

Renewable energy, site and climate, sun geometry, passive cooling, shading, natural & artificial lighting and solar cell.

Prerequisites: -**References:**

1. Donal Watson, *The Energy Design Handbook*, The American Institute of Architecture Press, 1993
2. Klaus Daniels, *The Technology of Ecological Building*, English translation by Elizabeth Schwaiger, Birkshauser Verlag, Berlin 1994
3. Norbert Lechner, *Heating Cooling Lighting*, Edisi kedua, terjemahan, PT Raja Grafindo Persada, 2007

ENAR800131**COMPUTATIONAL DESIGN AND PARAMETRIC MODELLING
3 CREDITS****Learning Objectives:**

Students should be able to use computation media as part of design process, using parametric and computer programing approach.

Syllabus:

Introduction to computation design tools, parametric approach, algorithmic architectura, and scripting software.

Prerequisites: Students have basic knowledge of NURBS and CAD modelling



References:

1. B Kolarevic, *Architecture in The Digital Age: Design and Manufacturing*, Spon Press, 2003
2. Mode Lab, n.d, *Foundations: Grasshopper Primer* Third Edition.
3. K Terzidis, *Algorithmic Architecture*, Routledge, 2006
4. R Oxman and R Oxman, *Theories of the Digital in Architecture*, Routledge, 2014

ENAR800632

**HIGH RISE BUILDING FACADE
3 CREDITS**

Learning Objectives:

Student should be able to master the principles of high rise building façade including aesthetics, technical, and environmental aspects.

Syllabus:

The essence of building façade of high rise building (resistance to earth quakes, lateral force/wind and water resistance); Façade design; Material and technology for façade detailing; Green façade.

Prerequisites: -

References:

1. Wolfgang Schueller, *Struktur Bangunan Bertingkat Tinggi*, PT Eresco, 1989
2. Mario Camp, *Skycrapers: An Architectural Type of Modern Urbanism*, Birkhauser, 2000
3. Hart, Henn, and Sontag, *Multi-Storey Buildings in Steel*, Granada Publishing, 1978
4. *Details in Architecture*
5. The Images Publishing Group, *Creative Detailing by Some of The World's Leading Architects*, The Images Publishing Group Pty Ltd, 2004

ENAR800133

**GEOMETRY AND ARCHITECTURE
3 CREDITS**

Learning Objectives:

Student should be able to understand the role of geometry as a basis of architectural form; should be able to explore various possible uses of geometry as the critical tools of analysis of existing architectural works and in the process of generating architectural design works.

Syllabus:

Development of knowledge on geometry and its implication for the development of architectural ideas and creativity; geometry and classical aesthetics of architecture; Euclidean and non Euclidean geometry in architecture; geometry and the concept of ideal city; geometry, music, and architecture; geometry and perception; topology in architecture; geometry in nature; exploration of the mechanism of geometry in shaping a design work and its potential for further development.

Prerequisites: -

References:

1. Vitruvius, *Ten Books on Architecture*, Dover Publications, 1960
2. Colin Rowe, *Mathematics of an Ideal Villa*, MIT Press, 1976
3. Peter Davidson & Donald L. Bates, *Architecture after Geometry*, Architectural Design, 1999
4. Irene Scalbert, Archis, *Towards a Formless Architecture: The House of the Future by A+P Smithson*, Archis, 1999
5. D'Arcy Thompson, *On Growth and Form*, Dover Publications, 1992
6. Jane Jacobs, *The Death and Life of Great American Cities*, RandomHouse, 1961
7. Elizabeth Martin, *Architecture as a Translation of Music in Pamphlet Architecture 16*, Princeton Architectural Press, 1994

ENAR800334

**HOUSING POLICY
3 CREDITS**

Learning Objectives:

Students should be able to understand that housing policy is a concept to manage housing sector in a country. Scope of housing policy: understanding, purpose, characteristic, motive, scope and implementation. Also, the relation to politic, social, economy, culture and environment and its impact to housings management.

Syllabus:

Indonesia as an archipelagic country: developing country, economic disparity and urban formation; Urbanization, migration: Indonesia demographic characteristic; constitution of society; Housing demand & supply (formal & informal sectors); Politics of the state and housing policy: Typology of housing provision in Indonesia (legal aspect; mode of consumption; mode of production); Housing economy and finance; Land policy; Housing technology; Housing policy in Asian countries

Prerequisites: -

References:

1. H Arendt, *The Human Condition*, The University of Chicago Press, 1958, pp. 7-17
2. M Heidegger tr by Albert Hofstadler, Kerper & Row, *Poetry, Language, Thought*, Publishing Inc., 1971, pp. 145-161
3. M Foucault, S. Daring (ed.), *'Space. Power and knowledge'*, The Cultural Studies Reader Second Edition, Routledge, 1999: 134-41
4. Henri Lefebvre translated by Donald Nicholson-Smith, *The Production of Space*, Blackwell, 1991, Chapter 1, pp. 26-52
5. P Bourdieu, *Outline of A Theory of Practice*, Cambridge University Press, 1977, pp. 72-95
6. M De Certeau tr by Steven F. Rendall, *The Practice of Everyday Life*, University of California Press, 1984, pp. 29-42 and 91-110
7. Kendig Hal L, *'Housing Careers, Life Cycle and Residential Mobility : Implications for the HousingMarket'*, Urban Studies, 1984, 21, 271-283
8. Michael Haan & Thomas Perks. *'The Housing Careers of Older Canadians: An Investigation Using Cycle 16 of the General Social Survey'*. Canadian Studies in Population Vol. 35.2, 2008, pp. 223-242
9. K. D. Willis, *Squatter Settlements*, Elsevier Ltd, 2009
10. Brian Sullivan & Ke Chen. *'Design for Tenant Fitout: A Critical Review of Public Housing Flat Design in Hong Kong'*. Habitat Intl. Vol 21. No 3, 1997, pp. 291-303
11. Leland Blank and Anthony Tarquin. *Engineering Economy: Seventh Edition*, McGraw Hills, 2012
12. B Harsman & J Quigley, *Housing Markets & Housing Institutions in a Comparative Perspective*. *Housing Markets & Housing Institutions*, Kluwer Academic, 1991, pp.1-29
13. Fashbir N Sidin, *Housing Policy Systems in South and East Asia*, Palgrave Macmillan, 2002, pp.161-176
14. John F.C Turner and Robert Fichter, *Freedom to Build*, Collier Mcmillan, 1972
15. John F.C Turner, *Housing By People: Towards Autonomy in Building Environtments*, The Value of Housing, 1976, pp. 53-74.
16. A T Alamsyah, Menata permukiman Pulau-Laut. Pidato Pengukuhan Guru Besar UI, 2008
17. Mayor Michael R Bloomberg and Amanda M.Burden, *Coastal climate resilience, Urban waterfront adaptive strategies*, Department of City Planning, 2013
18. A T Alamsyah, Regionisme dalam Penataan Permukiman di Gugus Pulau Mikro, Disertasi, PSIL UI, 2006
19. Diposaptono, Subandono, Budiman, Hidup Akrab dengan Gempa dan Tsunami, Penerbit Buku Ilmiah Populer, 2008

ENAR800135

EVERYDAY AND ARCHITECTURE

3 CREDITS

Learning Objectives:

Student should be able to understnd the existence of everyday phenomena as an approach to architecture; should be able to define the position of architecture discipline in responding to various phenomena of everyday living space.

Syllabus:

Understanding and historical background of the concept of the 'everyday' in architecture; domestic space; aesthetic in architecture and the 'everyday', the concept of an ideal city and its relation to the 'everyday'; cyber space and virtual space; the phenomenon of the 'everyday' in urban space: a participatory approach in architecture.



Prerequisites: -

References:

1. Steven Harris & Deborah Berke (eds.), *Architecture of the Everyday*, Princeton Architectural Press, 1997
2. Sarah Wigglesworth & Jeremy Till (eds.), *The Everyday and Architecture*, Architectural Design, 1998
3. Michel de Certeau, *The Practice of Everyday Life*, University of California Press, 1998
4. Malcolm Miles, *The Uses of Decoration: Essays in the Architectural Everyday*, Wiley, 2000
5. Jonathan Hill (ed), *Occupying Architecture*, Routledge, 1998
6. Margaret Crawford, et.al, *Everyday Urbanism*, Monacelli, 1999, Arnstein, *Ladder of Citizen Participation*, 1969

**ENAR800636
PROJECT MANAGEMENT
3 CREDITS**

Learning Objectives:

Student should be able to develop knowledge about project management and process in design and built environment, particularly administration of technical aspects and building economy from early stage of the project, design, construction, to the the end of the project; should be able to analyze the content of project management documents, building regulation and standard; should be able to create proposal, TOR, auction document, design administration, construction administration, or Project Manual of construction service in small scale project, including working with real client.

Syllabus:

As a product, project management is record of series of project activities as a holistic process, including as a working guide, coordination tools, and as a control for a project. As a process, project management is series of activities that produce responsibilities toward the quantity of records of the whole stages of project management, in one multidiscipline function. This subject introduces the skills required to manage project along its stages through chronological model.

Prerequisites: -

References:

1. PMI, *A Guide to Project Management Body of Knowledge (PMBOK Guides) 3 ed*, Project Management Institute, 2004
2. J.M Amos and B.R Sarchet, *Management for Engineers*, Prentice-Hall Inc,
3. D Sbarrie, *Professional Construction Management*, McGraw-Hill, 1986
4. D Cadman and L Austin-Crowe, *Property Development*, EF & N Spon, 1978

**ENAR800337
UNDERSTANDING PHENOMENON: PLATO TO DERRIDA
3 CREDITS**

Learning Objectives:

Students should have knowledge about architecture philosophy, especially the differences of knowledge and empirical verification, and metaphysics explanation to understand architecture. Students also should be able to demonstrate critical thinking of each architectural phenomenon observation.

Syllabus:

Shapes and forms of physic and metaphysic, ontological understanding about 'what' and 'whatness' of architectural shape from empiric and metaphysic, Plato and Khora. Husserl phenomenon and pphenomenology (essentialism) and Heidegger (existentialism), semiotic sign, myth, simulacra and deconstruction, Knowledge-Power

Prerequisites: -

References:

1. R Barthes tr by Annette Lavers, *Mythologies*, Hill and Wang, 1972
2. J D Caputo (ed.), *Decosntruction in a Nutshell: Conversation with Derrida*, Fordham University Press, 1997



3. G Deleuze tr by Paul Patton, *Difference and Repetition*, Columbia University Press, 1994
4. J Derrida edited by Thomas Dutoit, *On The Name*, Edited by Thomas Dutoit. Stanford University Press, Stanford, 1993, chapter about *Khōra*
5. J Derrida tr by Gayatri Spivak, *Of Grammatology*, The John Hopkins University Press, 1974, *Translator's Note* by G. Spivak
6. M Heidegger, *Language, Poetry and Thinking*, Perennial Classic, 1971, chapter: *Dwelling, Building and Thinking*.
7. D Moran, *Introduction to Phenomenology*, Routledge, 2000
8. R H Popkin and Avrum Stroll, *Philosophy Made Simple*, Doubleday Compay, Inc., 1956

ENAR800238
CITY PLANNING
3 CREDITS

Learning Objectives:

Student should be able to understand history and theory of urban planning through historical survey and/or through key themes; should be able to understand (1) how urban space works (based on historical context) based on spatial planning research; (2) key paradigms in urban planning thinking. This subject is arranged around principle that history of urban planning is a theory of urban planning that is bounded by planning ethics.

Syllabus:

Syllabus is arranged following a chronological order that is divided by 5 sections: (1) reflection towards design ideas, origin and design practice; industrial city and housing question; spatial order exploration; (2) Modernist City; Colonial and Post-Colonial experiments; (3) Sub-urban dream (legacy of American city planning); from ghetto to city role model (racial and ethnic control); (4) City and citizenship in different historical moments; spatial rules and arrangements (basic rules of design); urban crisis, urban management, and business city; building a world class city in global south; (5) compatible theories in design and justice; see design over neo-liberalism: paradigm occurs in planning.

As an alternative, syllabus could also interrupt this chronological order and arrange as a survey class that arrange these materials in key themes, such as: Empire; Colonial/Post-colonial; Modernity and Alternatives; Pacific Rim Capitalism Transnational Urbanism; Race/Ethnic, Planning and Real Estate; City and Village; Marginality; Re-building A City; Entrepreneur City; Dystopia Planning and Post-city.

Prerequisites: -

References:

1. Selected articles from *Journal of Planning Theory & Practices*; *Cities, Space & Polity*, *International Journal on Urban Regional Research*; *Journal of Planning Education and Research*; *Journal of Urban Studies*; *Journal of Urban Forum*; *Journal of Urban History*, *Environment and Urbanization*; *Antipode*; *Journal of Planning Literature*
2. Paul H. Gleye, "City Planning versus Urban Planning: Resolving Profession's Bifurcated Heritage," in *Journal of Planning Literature*, 2015, Vol 30(1), 3-17.
3. John Friedmann, *Planning in the Public Domain: From Knowledge to Action*, 1987
4. Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*, Blackwell Publishing, 2002 (3rd ed)
5. Friedrich Engels, *The Housing Question*, Lawrence and Wishart, Ltd, 1942
6. Mike Davis, *Planet of Slum*, Verso, 2007
7. Dolores Hayden, *Redesigning the American Dream: The Future of Housing, Work, and Family Life*, W.W Norton & Company, 2007 (2nd ed)
8. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning*, MIT Press, 1986
9. Kermit C Parsons & David Schuyler (eds), *From Garden City to Green City: The Legacy of Ebenezer Howard*, Baltimore: The John Hopkins University Press, 2002
10. The Congress for the New Urbanism. 2001. Charter.
11. Robert Caro, *The Power Broker: Robert Moses and the Fall of New York*, Vintage, 1975
12. Marshall Berman, *All That is Solid Melts into Air*, Penguin Book, 1988
13. James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, 1999
14. Nezar AlSayyad (ed), *Forms of Dominance: On the Architecture and Urbanism of the Colonial Enterprise*, Avebury, 1992
15. Lisa Peattie, *Planning: Rethinking Ciudad Guayana*, University of Michigan Press, 1987
16. James Holston, *The Modernist City: An Anthropological Critique of Brasilia*, University of Chicago Press, 1989



17. June Manning Thomas and Marsha Ritzdorf (eds), *Urban Planning and the African American Community: In the Shadows*, SAGE Publication, Inc, 1996
18. Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States*, Oxford University Press, 1987
19. St Clare Drake & Horace R. Cayton, *Black Metropolis: A Study of Negro Life in a Northern City*, University of Chicago Press, 1993.
20. Edward Banfield, *Unheavenly City Revisited*, Waveland Press, 1990
21. Susan S Fainstein & Scott Campbell, *Reading in Planning Theory*, Wiley-Blackwell, 2011
22. Lewis Mumford, *The City in History: Its Origin, Its Transformation and Its Prospects*, A Harvest/HBJ Books, 1961
23. Stephen Graham & Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition*, 2001
24. Aihwa Ong & Ananya Roy (eds), *Worlding Cities and the Art of Being Global*, Wiley-Blackwell, 2011
25. Patsy Haley, E.A Silva, et.al, “*Routledge Handbook on Planning Research Methods*” Routledge, 2015.
26. Faranak Mirahtab, *Cities in the Global South Reader*, Routledge, 2014.

ENAR800039
INDEPENDENT STUDY
3 CREDITS

Learning Objectives:

Students should be able to demonstrate advanced architectural knowledge on particular topic and to implement the knowledge into the development of ideas of architectural intervention.

Syllabus:

Advanced studies on architectural knowledge in particular context; development of architectural intervention ideas based on thorough inquiry of contexts and theoretical inquiry on related topic.

Prerequisite: -

References: Relevant references to the topic offered.

ENAR800040
CAPITA SELECTA
3 CREDITS

Learning Objective:

Students should be able to expand their knowledge on various topics that support acquisition of architectural knowledge and design skills.

Syllabus:

Selected topics that are relevant to architectural knowledge, design skills and their recent development.

Prerequisite: -

References: Relevant references to the topic offered.

ENAR800041
SPECIAL TOPIC ON ARCHITECTURAL DESIGN
3 CREDITS

Learning Objectives:

Students should be able to demonstrate knowledge on current architectural discourse and its implementation in architectural design.

Syllabus:

Studies on the development of contemporary architectural theories; the development of architectural design methods; the development of architectural representation techniques; the development in other relevant disciplines that have impacts of the development of architectural design



theories and methods.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR800042
SPECIAL TOPIC ON URBAN DESIGN
3 CREDITS**

Learning Objectives:

Students should be able to demonstrate knowledge on current urban design discourse and its implementation in urban design.

Syllabus:

Studies on the development of urban design theories; the development of urban design methods; studies on current issues that are relevant to urban design; the development in other relevant disciplines that have impacts on the development of urban design theories and methods.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR800043
SPECIAL TOPIC ON URBAN HOUSING AND SETTLEMENT
3 CREDITS**

Learning objectives:

Students should be able to demonstrate knowledge on current development of urban housing and settlement.

Silabus:

Studies on the development of urban housing and settlement theories; studies on current issues that are relevant to urban housing and settlement.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR800044
SPECIAL TOPIC ON PROPERTY
3 CREDITS**

Learning objectives:

Students should be able to demonstrate knowledge on current development of property.

Silabus:

Studies on the property development; studies on current issues that are relevant to property development.

Prerequisite: -

References: Relevant references to the topic offered.

**ENAR800045
SPECIAL TOPIC ON ARCHITECTURAL HISTORY, THEORY, AND CRITICISM
3 CREDITS**

Learning Objectives:

Students should be able to demonstrate historical and theoretical knowledge on the development of architecture.



Syllabus:

Studies of architectural history throughout various periods of time; the development of discourse on architectural history and theory.

Prerequisite: -

References: Relevant references to the topic offered.

ENAR800046

SPECIAL TOPIC ON SUSTAINABILITY

3 CREDITS

Learning Objectives:

Students should be able to demonstrate knowledge on current discourse on sustainability and its implementation on architectural design.

Syllabus:

Studies on the development of theories on building technology and sustainable environment; studies on relevant issues of sustainability; architectural design innovative practice related to sustainability; innovation on building structure, construction, material and systems.

Prerequisite: -

References: Relevant references to the topic offered.

ENAR800047

TEACHING ASSISTANTSHIP

3 SKS

Learning Objectives:

Students should be able to understand the learning principles and able to teach as studio or course facilitator in undergraduate program.

Syllabus:

Basic learning: Learning theory: behaviorism, cognitive constructivism and social constructivism; instructional method and techniques to facilitate architecture learning; evaluation methods and assessment; design studio learning process.

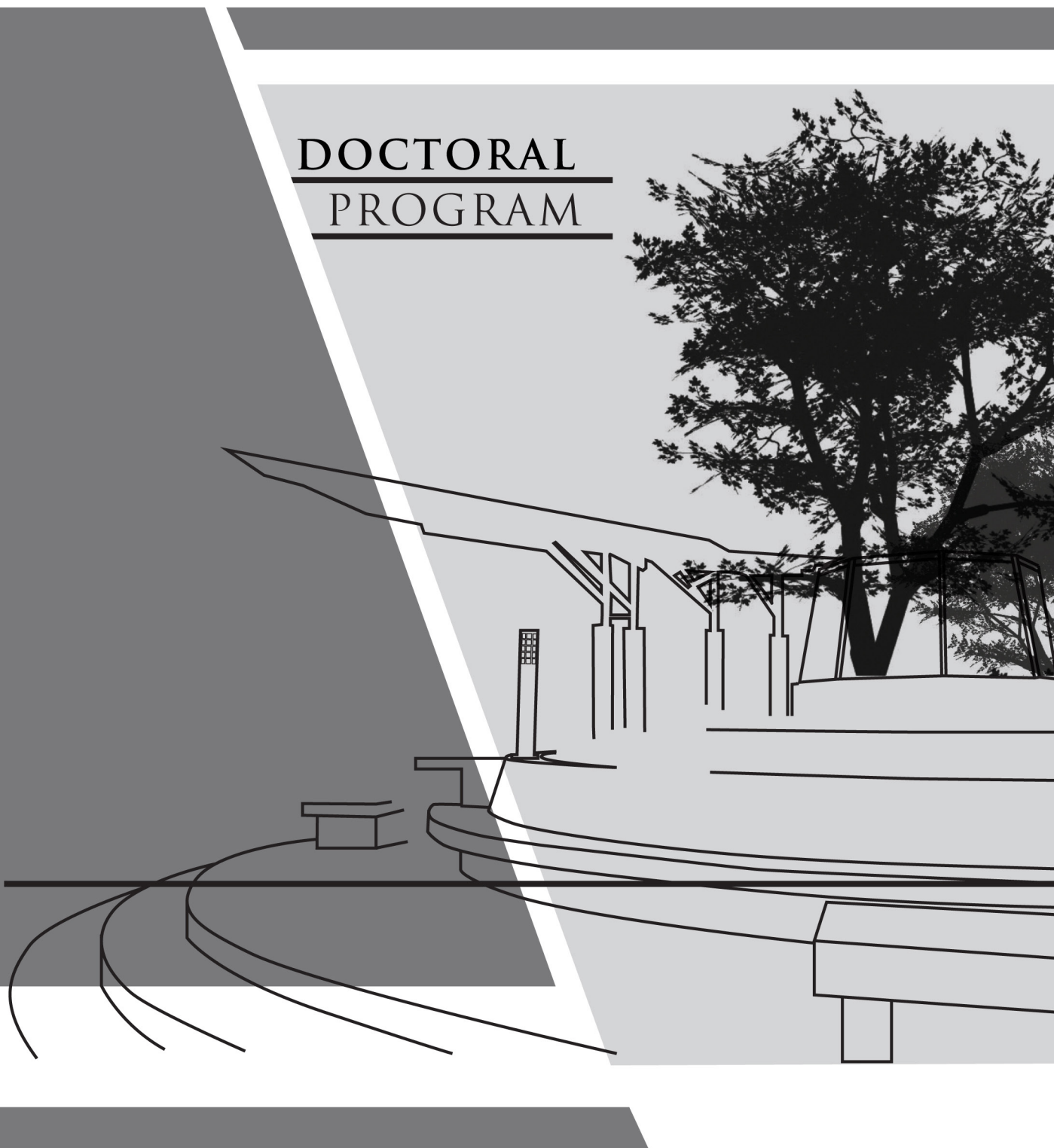
Prerequisites: -

References:

1. Heather Fry, Steve Ketteridge and Stephanie Marshall (eds.), *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice* (Third edition), Routledge, 2009.
2. David Nicol and Simon Pilling, *Changing Architectural Education: Towards a New Professionalism*, Taylor & Francis, 2000.
3. Rosie Parnell et al., *Crit: An Architecture Student's Handbook*, Routledge, 2007



DOCTORAL PROGRAM



7. DOCTORAL PROGRAM

FTUI holds Doctoral Program for the six following study programs:

1. Civil Engineering
2. Mechanical Engineering
3. Electrical Engineering
4. Metallurgy & Material Engineering
5. Chemical Engineering
6. Architecture
7. Industrial Engineering

FTUI Doctoral program was officially opened in 2000 with the opening of the Civil Engineering and Electrical Engineering Doctoral program followed by the emersion of the Opto-electrotechnique and Laser Application study program into the Postgraduate Program of FTUI. The Mechanical Engineering study program was officially opened in 2006 while the Metallurgy & Material Engineering and Chemical Engineering followed in 2007. And In 2009, respectively Department of Architecture opened the Architecture Doctoral Program. In 2001, the Opto-electrotechnique and Laser Application was closed and was emerged into the Electrical Engineering study program. Each Doctoral study program is headed by the Head of Study Program which is held ex-officio by the Head of Department in the Faculty of Engineering UI. The Doctoral study programs have one or more focus subjects to give a more specific knowledge on engineering field to all students of the program.

Currently, the Doctoral Program is held in two ways: Lecture & Research; and Research.

New Students Selection

Selection process for new students for the FTUI Doctoral Program is as follow:

1. Pre-admission stage: future student is encouraged to informally contact their prospective Promotor or the Head of Department to further discuss his/her desired dissertation topic. This is important to make sure the availability of Promotor in accordance to said research topic. Communication may be done through email or face to face. The Head of Department and future Promotor then would discuss the student's proposal internally.
2. Future student should register online via <http://penerimaan.ui.ac.id> and complete the required documents and prerequisites.
3. Future student will then take the entrance examination (SIMAK UI) which consists of: (i) Academic Potential Examination and (ii) English Proficiency Test.
4. The results of the Entrance Examination will then be sent to FTUI by the UI Entrance Examination Committee. These results will then be discussed in a Department Committee Meeting headed by the Head of Department to determine which students accepted, and the proposed research topic approved, and the availability of future Promotor. An interview have to be arrange with the future student to determine the suitability of research topic, with previous study field, and the student's commitment to participate in the Doctoral program full time. Interview may be done directly or through email or messenger application.
5. The outcome of the Department Committee Meeting will then be submitted to the UI Entrance Examination Committee to be announced.

Academic Counseling

Since the day a student is registered as student for the Doctoral program until the time that he/she passes qualification examination, the student will be under the guidance of an academic advisor who the student expected to be their Promotor or Co-Promotor. Head of Department accepts a proposal of future Promotor/Academic Advisor from a committee in the Department. Once the student pass the qualification examination, the student will earn status as Doctor Candidate and the Academic Advisor's status will revert to Promotor/Co-Promotor.

Promotor and Co-Promotor

Promotor and Co-Promotor for Doctoral Program are lecturers or experts from related field and are assigned by Head of Department based on a Rector's Decree to guide and advise a Doctor candidate in



conducting research and dissertation writing. Academic Advisor consist of 1 Promotor and a maximum of 2 (two) Co-Promotors. Promotor is a first chair Advisor who holds an academic degree of Professor or Doctor and a minimum of Senior Lecture academic position; has a relevant expertise in the field which the student's dissertation topic is; and is acknowledge as a full time faculty at the Universitas Indonesia, and for the last five years has produced at the latest: one scientific paper in an accredited national journal or a reputable international journal; or one other form of scientific product which is acknowledge by a group of experts set up by the Academic Senate of Universitas Indonesia.

Co-Promotors are the Promotor's companions who act as second and/or third chair advisor who hold academic degree of Doctor or Senior Lecturer, and has a relevant expertise in the field with the student's dissertation topic. Co-Promotor from outside of the Faculty of Engineering UI must have the approval from the Promotor. Promotor and Co-Promotors are appointed by the Rector based on the proposal submitted by the Dean which are also based on suggestions from the Head of Department after the student has pass the qualification examination. The appointment must be done at the latest 1 (one) semester after the qualification examination. A change of Promotor/Co-Promotor must be proposed by the Dean to the Rector based on a proposal from the Head of Department.



Program Specification

1	Awarding Institution		Universitas Indonesia
2	Teaching Institution		Universitas Indonesia
3	Programme Title		Doctoral Program in Civil Engineering Doctoral Program in Mechanical Engineering Doctoral Program in Electrical Engineering Doctoral Program in Metallurgy & Material Engineering Doctoral Program in Chemical Engineering Engineering Doctoral Program in Architecture Doctoral Program in Industrial Engineering
4	Class		Regular
5	Final Award		Doctor (Dr.)
6	Accreditation / Recognition		Civil Engineering Doctoral Program: Accreditation A from BAN-PT Mechanical Engineering Doctoral Program: A Accreditation A from BAN-PT Electrical Engineering Doctoral Program: Accreditation A from BAN-PT Metallurgy & Material Engineering Doctoral Program: Accreditation A from BAN-PT Chemical Engineering Engineering Doctoral Program: Accreditation A from BAN-PT Architecture Doctoral Program: Accreditation B from BAN-PT Industrial Engineering Doctoral Program: On Accreditation Process
7	Language(s) of Instruction		Indonesia
8	Study Scheme (Full Time / Part Time)		Full Time
9	Entry Requirements		Master graduate from study programs in line with study program chosen and pass the entrance examination
10	Study Duration		Designed for 3 years
	Type of Semester	Number of semester	Number of weeks /semester
	Regular	6	14 - 17
	Short (optional)	none	none

11	<p>Streams:</p> <p><i>The Civil Engineering Doctoral Program has six streams as follow:</i></p> <ul style="list-style-type: none"> • Structure • Construction Management • Transportation • Water Resource Management • Project Management • Geotechnique <p><i>The Mechanical Engineering Doctoral Program has four streams as follow:</i></p> <ul style="list-style-type: none"> • Energy Conversion • Engineering Design and Product Development • Manufacture Engineering • Fire Safety Engineering and Management <p><i>The Electrical Engineering Doctoral Program has eight streams as follow:</i></p> <ul style="list-style-type: none"> • Telecommunication Engineering • Electrical Power and Energy Engineering • Photonic and Electronic Engineering • Control Engineering • Multimedia and Information Engineering • Security of Information Network Engineering • Telecommunication Management • Electrical Power and Energy Management <p><i>The Metallurgy & Material Engineering Doctoral Program has two streams as follow:</i></p> <ul style="list-style-type: none"> • Corrosion and Protection • Material Engineering and Manufacture Process <p><i>The Chemical Engineering Doctoral Program has five streams as follow:</i></p> <ul style="list-style-type: none"> • Industry Catalist • Gas Management • Product Design and Chemical Process • Environmental Protection and Work Safety • Gas Technology <p><i>The Industrial Engineering Doctoral Program has two streams as follow:</i></p> <ul style="list-style-type: none"> • Rekayasa Kualitas Manufaktur • Rekayasa Sistem Jasa
12	<p>Graduate Profiles:</p> <p>FTUI Doctoral Program Graduates have the capabilities of demonstrating expansion, novelty breakthrough in research in the engineering or architecture field in accordance to certain stream or sub-stream. The FTUI Doctoral Program prepares student to work in academic and research in accordance to their own stream; dedicate their expertise in research laboratory, industry or government institution; or create a business based on their innovation.</p> <p>Graduates are able to possess the following skill:</p> <ul style="list-style-type: none"> • Be able to show expertise in the engineering or architecture discipline; • Be able to uphold the academic and research ethics; • Be able to work collaboratively in research; • Be able to position themselves as leader in their community; • Be able to communicate well in their community and build networks; • Be able to demonstrate individual live skill in connection to human relationship; • Be able to demonstrate attitude, behavior and way of thinking which support their success in society.



13	Graduates Competence: The aim of Doctoral Program in FTUI is in line with the Doctoral Program of Universitas Indonesia, to produce quality graduates with the following competence: <ol style="list-style-type: none"> 1. Able to independently update their knowledge on science and technology in engineering or architecture through research based innovation breakthrough. 2. Able to show professionalism in their field of study that can be accountable towards the development of science and technology. 3. Able to write a scientific paper in engineering or architecture and convey the result of their research to the public both orally or written in an international scientific activity. 4. Able to recommend a solution for a complex problem faced by society in the field of engineering or architecture through inter, multi and trans discipline approach. 5. Able to lead a working or research team to solve problem in the field of engineering or architecture that can be of benefit for the good of mankind. 6. Able to develop and maintain a network of cooperation with fellow researcher and research community in the field of engineering and architecture both in national and international level. 		
14	Classification of Subjects. (Course & Research)		
No	Classification	Credit Hours	Percentage
i	Course Component	18	34 %
ii	Research Component	34	66 %
	Total	52	100 %
14	Classification of Subjects. (Research)		
No	Classification	Credit Hours	Percentage
i	Course Component	0	0 %
ii	Research Component	52	100 %
	Total	52	100 %
15	Total Credit Hours to Graduate		52 CP

Curriculum Structure for FTUI Doctoral Program

The curriculum structure for the Doctoral Program in all study programs are the same, they are only differentiated by their codes for the research component. The code “xx” for each study programs are as follow:

ENCV for Civil Engineering, ENME for Mechanical Engineering, ENEE for Electrical Engineering, ENMT for Metallurgy & Material Engineering, ENAR for Architecture, and ENCH for Chemical Engineering.

The FTUI Doctoral Program is held in two program: Course and Research and Research.

1.1. DOCTORAL PROGRAM (COURSE & RESEARCH)

The following is the curriculum structure for Course & Research Doctoral Program in Table 1.
Table 1. The Curriculum Structure - Doctoral Program in Course and Research

KODE/CODE	MATA AJARAN	SUBJECT	SKS
	Semester 1	1st Semester	
ENGE900001	Metode Penelitian Lanjut	Advanced Research Method	6
ENAR900001	Kekhususan 1	Special Subject 1	4
		Sub Total	10
	Semester 2	2nd Semester	
ENGE900002	Analisis Kualitatif & Kuantitatif	Qualitative & Quantitative Analysis	4
ENAR900002	Kekhususan 2	Special Subject 2	4
ENAR900004	Proposal Riset	Research Proposal	6
		Sub Total	14
	Semester 3	3rd Semester	
ENAR900006	Publikasi - Konferensi Internasional	Publication - International Conference	4
		Sub Total	4
	Semester 4	4th Semester	
ENAR900007	Ujian Hasil Riset	Research Result Examination	10
		Sub Total	10
	Semester 5	5th Semester	
ENAR900008	Publikasi II - Jurnal Internasional	Publication II - International Journal	8
		Sub Total	8
	Semester 6	6th Semester	
ENAR900010	Sidang Promosi	Sidang Promosi	6
		Sub Total	6
Total			52

The Lecture Component includes four subjects:

- Advanced Research Method, 6 sks
- Qualitative and Quantitative Analysis, 4 sks
- Special Subject I, 4 SKS.
- Special Subject II, 4 SKS.

The Research Component includes:

- Research Proposal, 6 SKS
- Publication - International Conference, 4 SKS



DOCTORAL PROGRAM

3. Research Result Examination, 10 SKS
4. Publication - International Journal, 8 SKS
5. Promotion Exam, 6 SKS

1.2. DOCTORAL PROGRAM (RESEARCH)

The following is the curriculum structure for Research Doctoral Program in Table 2.

Table 2. The Curriculum Structure - Doctoral Program in Research

KODE/CODE	MATA AJARAN	SUBJECT	SKS
	Semester 1	1st Semester	
ENAR900003	Seminar Berkala Kelompok Ilmu	Research Group Periodic Seminar	8
		Sub Total	8
	Semester 2	2nd Semester	
ENAR900004	Proposal Riset	Research Proposal	6
		Sub Total	6
	Semester 3	3rd Semester	
ENAR900005	Publikasi I - Konferensi Internasional	Publication I - International Conference	4
		Sub Total	4
	Semester 4	4th Semester	
ENAR900007	Ujian Hasil Riset	Research Result Examination	10
		Sub Total	10
	Semester 5	5th Semester	
ENAR900008	Publikasi II - Jurnal Internasional	Publication II - International Journal	8
		Sub Total	8
	Semester 6	6th Semester	
ENAR900009	Publikasi III - Jurnal Internasional	Publication III - International Conference	8
ENAR900010	Sidang Promosi	Sidang Promosi	6
		Sub Total	14
Total			52



Description of Subjects

ENGE900001

ADVANCED RESEARCH METHOD

6 SKS

Learning Objective(s): Course participants are expected to: (a) master the scientific work process based on science philosophy, which is the scientific justification aspects, innovative aspects and scientific ethics aspects, (b) able to write a research proposal and or draft of scientific writing related to the student's doctoral topic, (c) can map research result from the latest international journal in their field and understand the state-of-the-art from their research topic, and can determine the knowledge gap yet explored in the international level for further research in their Doctoral Program.

Syllabus: (1) Relationship between philosophy and engineering science; (2) Science Philosophy; (3) Epistemology in Engineering Science; (4) Research Method; (5) Problem formulation and hypothesis; (6) Research and state of the art; (7) Research Evaluation; (8) Design Evaluation and research Stages; (9) Introduction to the analysis of the data processing method; (10) Benchmark on research output and conclusion formulation; (11) Various citation method; (12) Finalization of research proposal draft and / or scientific article draft.

Prerequisite(s): None

Textbooks:

Haryono Imam R dan C. Verhaak, *Filsafat Ilmu Pengetahuan*, Gramedia, Jakarta, 1995

Willie Tan, "Practical Research Methods", Prentice Hall, 2002.

R. Kumar, *Research Methodology, A Step-by-step Guide for Beginner*, 3rd ed., Sage Pub, 2012

ENGE900002

QUALITATIVE AND QUANTITATIVE ANALYSIS

4 SKS

Learning Objective(s): Discuss the qualitative and quantitative in data analysis and exploring specific data analysis areas. After participating in this subject which discuss the qualitative and quantitative approach in data analysis in exploring specific areas of data analysis. Students are expected to be able to build the following learning outcome: (1) awareness to situations requiring qualitative data analysis in the inductive paradigm; (2) awareness to situations requiring quantitative data analysis in the deductive paradigm; (3) appreciation toward various approaches; (4) possessing skills in giving critical appraisal; (5) possessing skills in performing qualitative and quantitative data analysis.

Syllabus: Introduction; Qualitative Analysis; Quantitative Analysis; Non-Parametric Analysis; Uncertainty Analysis; Critical Appraisal; Design of Experiment; ANOVA revisit; Multivariate Techniques.

Prerequisite(s): None

Textbooks:

Miles M & Huberman M, *Qualitative Data Analysis*, London Sage Publications, (1994)

Montgomery, D.C., & Runger, G.C, *Applied Statistics and Probability for Engineers* 3rd Ed., John Wiley and Sons, Inc., New York, (2003)

Kirkup, L, *Experimental Method: An Introduction to the Analysis and Presentation*, John Wiley and Sons, Australia, Ltd., Queensland, (1994)

Montgomery, D.C, *Design and Analysis of Experiments* 6th Ed., John Wiley and Sons, Inc., New York, (2005)

Hair, J.F., B.Black, B.Babin and R.E Anderson, *Multivariate Data Analysis* 6th Ed., Pearson Education Inc., New Jersey, (2006)

ENAR900001

Special Subject 1

4 SKS

ENAR900002

Special Subject 2

4 SKS

Special Subject 1 in the 1st first semester (4 SKS) and Special Subject 2 in the 2nd semester (4 SKS) are determined together with the student's Academic Advisor to support the student's research and/or to develop the student's knowledge with information and knowledge from unrelated field. Academic Advisor is also allowed to propose a special content for the student to Head of Department.

The following are the requirements for the implementation of Special Subject 1 and 2:



For students who do not have in line Master degree educational background from the Faculty of Engineering Universitas Indonesia, they are allowed to take the similar courses of the related field of study available at the Master Program in FTUI during the running semester.

Students are also allowed to take courses from other study programs within the Faculty of Engineering Universitas Indonesia or courses from other faculties in UI as stated in the Guidance Book or the Master/Doctoral Program Catalog.

Students are allowed to take classes in other Master Program in the Faculty of Engineering Universitas Indonesia or other faculties within the Universitas Indonesia as deemed necessary by their Academic Advisor

In the event where neither conditions is viable for the students, the Academic Advisor is allowed to conduct a class of said course.

ENAR900003**Research Group Periodic Seminar****8 SKS**

Research Group Periodic Seminar is an early activity of research in the Doctoral Program in Research where students conduct literature study in relation to the materials for their research. This literature study must be done intensively by mapping out the research results from the latest international journals in related field. The final aim was so that students have a state-of-the-art understanding of their research topic, and can determine the knowledge gap previously unexplored in the international level for further research in their Doctoral Program. The result of this literature study is compiled in a literature study report presented in the Research Group Periodic Seminar to be examined by a panel comprises of future Promoter / Academic Advisor and Examiners from related field of study. Students will passed this Research Group Periodic Seminar if they received a minimum grade of B.

ENAR900004**Research Proposal****6 SKS**

Research Proposal is the continuous activity of the literature study, where after gaining a state-of-the-art knowledge of their research topic, students can formulate the scope of their Doctoral research and determine which research method will be use. The result of this activity is a comprehensive research proposal which include: goals, background and data analysis from early study or experiments done. Included in this research proposal is plan of work for each semester and its publication goals. At this level, it is expected for students to begin experiment activity or early study which can show the direction of their research is feasible and recent in his field. The early experiment or study result, the literature study and the whole research plan is then compiled in a Research Proposal Report to be presented and examined in a Research Proposal Examination. Students will passed this Research Proposal if they received a minimum grade of B.

ENAR900007**Research Output Examination****10 SKS**

At this stage, students are expected to have a research output with a minimum of 75% from their research plan. Doctorate candidate are expected to have reach a research outcome which is the main part of the originally planned contribution. The outcome of this research is measured through the Research Output Examination. The examination committee is appointed through the Dean's Decree based on the Head of Department's proposal. These examiners consist of experts related in the field of study of the Doctorate candidate with at least one examiner from an institution outside of Universitas Indonesia. Doctor Candidate will passed this Research Output Examination if they received a minimum grade of B. At this stage, a Doctor Candidate are allowed to design a scientific article framework to be published in an indexed International Journal and determine which International Journal they will send the article to.

ENAR900006**Publication - International Conference****4 SKS****ENAR900005****Publication I - International Conference****6 SKS**

At this stage, students are expected to have an experiment result or study to focused on in their research topic and clarify their research direction. The result of the experiment must also show innovation or breakthrough, mastery of knowledge on their stream in relation to their research topic, the depth of their research materials, and the mastery of the state of the art development in their field or research interest, originality, and the contribution towards science and/or its implementation. Once presented in front of their promoter and co-promoter, the whole research result at this stage will be deemed worthy for international conference publication.

ENAR900008**Publication II - International Journal****8 SKS****ENAR900009****Publication III - International Journal****8 SKS**

The scientific publication is an integral part of research activity and a prerequisite in participating in a Promotion Examination. International Journal meant here is an English language journal which its editorial board consists of member from at least three different countries or more. A mandatory publication must have an "Accepted" status before the Promotion Examination. FTUI itself publish their own international journal, the International Journal of Technology (IJTech), which students can utilize as one of the international journal to publish their Doctoral research.

ENAR900008**Promotion Examination****6 SKS**

Before deemed fit to participate in a Promotion Examination. Doctor Candidate are required to conduct additional research as a follow up from the Research Output Examination. The inputs and revisions given during the Research Output Examination must be completed and revised through a series of final research. At this stage, the Doctor Candidate must prove the authenticity and originality of their research as new contribution to the scientific world. Thus, at this stage, the Doctor Candidate is required to have an "Accepted" for their international Journal, they are also required to complete their dissertation paper ready to be tested during the Promotion Examination.

Dissertation is an academic scientific paper study output and/or in depth research done independently and contained new contribution to issues that are temporary already known the answer or new questions ask on issues that are seen to have been established in the field of science and technology by the Doctor Candidate under the guidance of his Academic Advisor. A Doctor Candidate that has completed the revision of their dissertation are required to submit a completed version of their dissertation in five hard cover books and original approval form that has been signed by their advisors and submitted to PAF FTUI signifying the end of their study. The format for writing and binding the Dissertation should follow the writing and binding guidelines in the Technical Guidelines of Final Project Writing for Students of



Universitas Indonesia that can be downloaded at <http://www.ui.ac.id/download>.

Promotion Examination is a scheduled academic activity as a medium of evaluation for the Doctor Candidate Dissertation as a requirement to obtain the highest academic title, Doctor. The requirements and provision for Promotion Examination are as follow:

- Promotion Examination can be done if all the scientific publication requirements are completed by the Doctor Candidate: a minimum of one publication in an International Scientific Journal (in “Accepted” status) in relation to their dissertation research. The Publication is required to state Faculty of Engineering Universitas Indonesia as one of the affiliation institution.
- Promoter and Co-Promoter gave a written approval on the dissertation as a sign that the dissertation can move forward to the Promotion Examination.
- The Promotion Examination is carried out by the Committee of Promotion Examination which is appointed with a Rector’s Decree based on a proposal from the Head of Department and the Dean of the Faculty of Engineering Universitas Indonesia.
- The Committee of the Promotion Examination comprises of: (a) Promoter and Co-Promoter, (b) The Examiners, (c) a minimum of one examiner from outside of Universitas Indonesia.
- Examiners consist of experts from related field of study. In a special circumstances, an expert that is not from the academic community can be invited as part of the examiners team.
- The Promotion Examination is led by the Head of the Examiners Committee that is also a member of the committee outside of the Promoter/Co-Promoter and outside examiner. If the Head of the Examiners Committee is unavailable, his/her position can be replaced by one of the member of the examiner team.
- The Promotion Examination is held as an open session for a period of maximum three hours divided into two stages: the dissertation presentation given by the Doctor Candidate for 15-30 minutes and a question and answer session for 120-165 minutes.
- The Doctor Candidate will pass the Promotion Examination if they received a minimum grade of B with GPA 3.00.

Facilities for Doctoral Program Students

To make sure that student of FTUI Doctoral Program are able to conduct full time research and produce excellent publications as required, FTUI provides the following facilities:

Doctoral Program Students’ Workstation

Compact cubicles in comfortable rooms are available as Doctoral program students’ workstation. The locations for these workstations are located on the 2nd and 3rd floor of the Engineering Center Building. Access to these workstations requires a swipe card to guarantee security. A round the clock wi-fi service is also available. To procure a workstation and access card, students are requested to register to the Associate Dean for General Affairs in the Dean’s building, 2nd floor, FTUI Depok.

International Journal Article Writing Training

These free of charge trainings for the FTUI Doctoral program students are held several times each year. The information regarding these trainings are communicated through an announcement in SIAK-NG, posters at each Department, Doctoral program mailing list and FTUI website (www.eng.ui.ac.id).

Research Proposal Writing Training

These free of charge trainings for the FTUI Doctoral program students are held several times each year. The information regarding these trainings are communicated through an announcement in SIAK-NG, posters at each Department, Doctoral program mailing list and FTUI website (www.eng.ui.ac.id).

Line Editing Draft for International Journal Article

FTUI provides funds for line editing drafts for International Journal Articles. Requirement for applying for this funds are: the article must include the promoter name as part of the writing team and state FTUI as the main affiliation. To be grant this facility, students only needs to send a draft of their article through email to the FTUI Associate Dean of Academic and Research (risetft@eng.ui.ac.id). The time required for line editing is 2-4 weeks.

Doctoral Program Mailing-List

The Doctoral Program mailing list is used as a communication tool between the Dean's Faculty Heads, the Faculty Center Administration staff and all Doctoral program students in FTUI. Information regarding trainings, seminars, grants or other academic matters is announced through this mailing list. Complaints and suggestions are also accommodated by this mailing list. The mailing list address is: programdokterft@group.eng.ui.ac.id

Research and Incentive Grants for Master and Doctoral Program

Research funds including consumables and tests for research as part of the thesis and dissertation writing is the responsibility of the student. There are a number of competitive research grants, incentive research grant schemes available from which Master and Doctoral program students may propose to finance his/her research. Complete guidance and research proposal examples are available at the Associate Dean for Research and Community Development secretary at the Dean's Building, 2nd floor or through <http://research.eng.ui.ac.id>.

International Journal Writing Incentive

This incentives are given to lecturer of State of Private Universities that have published an article in an international journal. Each proposer must be the first writer of the article and include an institution affiliation in Indonesia.



UI Campus, Depok 16424
Ph : +62 21 7863503-05, 78888430
Fax : +62 21 7270050

www.eng.ui.ac.id