ACADEMIC YEAR 2022-2023

ACADEMIC GUIDELINES
FACULTY OF ENGINEERING

URBAN AND REGIONAL PLANNING

UNIVERSITAS BRAWIJAYA

TABLE OF CONTENTS

PREFACE

To achieve the goals of higher education based on the national standards of higher education established by the Ministry of Education, Culture, Research, and Technology within the Faculty of Engineering at Universitas Brawijaya, the Education Guidelines for the academic year 2022-2023 have been issued.

These Education Guidelines serve as a detailed implementation of Law Number 12 of 2012 concerning Higher Education, Minister of Research, Technology and Higher Education Regulation Number 44 of 2015 concerning National Standards for Higher Education, and the Regulation of Minister of Research, Technology and Higher Education Number 50 of 2018 concerning Amendments to the Regulation of Minister of Research, Technology and Higher Education Number 44 of 2015 concerning National Standards for Higher Education, as well as the Regulation of the Ministry of Education and Culture Number 3 of 2020 concerning National Standards for Higher Education.

The Education Guidelines are expected to provide transparent information and guidance to leaders, students, lecturers, and all stakeholders regarding the fundamentals of the teaching and learning process at the Faculty of Engineering, Universitas Brawijaya. Considering the evolving nature of educational issues and government regulations, the education guidelines are enforced per academic year; thus, adjustments and updates to the education guidelines will always be made according to the needs and developments that occur.

Therefore, we hope that these education guidelines can fulfill their function as a reference in the implementation of the teaching and learning process, and are used in accordance with applicable rules and procedures.

Faculty of Engineering, Universitas Brawijaya
Dean,

Sgn.

Prof. Ir. Hadi Suyono, S.T., MT., Ph.D., IPU., ASEAN Eng
NIP. 19730520 200801 1 013

EDUCATION GUIDELINES OF THE FACULTY OF ENGINEERING UNIVERSITAS BRAWIJAYA
2022 – 2023

VISION, MISSION, OBJECTIVES OF THE FACULTY OF ENGINEERING UNIVERSITAS BRAWIJAYA

VISION

Serving as an innovative, collaborative, and internationally competitive Faculty of Engineering in implementing the three pillars of higher education for the welfare of society

MISSION

1. Conducting and enhancing the quality of education that is internationally competitive to produce outstanding graduates who demonstrate entrepreneurial quality and noble character.
2. Conducting innovative and collaborative research and community service to support sustainable development for societal welfare.
3. Establishing institutional governance that is independent, fair, transparent, accountable, responsible, and credible.

OBJECTIVES

1. Achieving a quality education process and cultivating graduates in engineering capable of global competition, professionalism, and possessing an entrepreneurial mindset.
2. Fostering collaboration to generate innovative technological endeavors that support sustainable development rooted in local wisdom.
3. Establishing an institutional governance system and resource management characterized by integrity and optimal performance.

DEAN'S DECREE OF THE FACULTY OF ENGINEERING UNIVERSITAS BRAWIJAYA
Number: 1219 Year 2022

Concerning

Education Guidelines of the Faculty of Engineering Universitas Brawijaya Academic Year 2022-2023

Considering :

1. That the Education Guidelines of the Faculty of Engineering, Universitas Brawijaya for the Academic Year 2021-2022 need to be refined and adjusted to the evolving needs of the community for Bachelor's, Diploma, Master's, Doctoral, and Engineering professionals, as well as with regulations issued by both the Ministry of Education, Culture, Research, and Technology and Universitas Brawijaya and the Faculty of Engineering itself;
2. That in order to regulate the implementation of education based on a credit system aligned with the Indonesian National Qualifications Framework (KKNI) and the National Standards of Higher Education, it is deemed necessary to refine the Education Guidelines of the Faculty of Engineering, Universitas Brawijaya, and issue them in the form of the Education Guidelines of the Faculty of Engineering, Universitas Brawijaya for the Academic Year 2022-2023.

Taking into account :

1. Law Number 20 of 2003 of the Republic of Indonesia concerning National Education System;
2. Law Number 12 of 2012 of the Republic of Indonesia concerning Higher Education;
3. Government Regulation Number 4 of 2014 of the Republic of Indonesia concerning Establishment of Higher Education and the Management of University;
4. Decree of the Minister of National Education of the Republic of Indonesia Number 232/U/2000 concerning the Guidelines of Curriculum Drafting for

Higher Education and Student Academic Performance Assessment;

5. Regulation of the Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 4 of 2016 concerning Organization and work Scheme of Universitas Brawijaya, as amended to Regulation of the Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 34 of 2016 concerning Amendment to Regulation of the Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 4 of 2016 concerning Organization and Work Scheme of Universitas Brawijaya;
6. Regulation of the Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 58 of 2018 concerning the Statute of Universitas Brawijaya;
7. Regulation of Minister of Education and Culture of the Republic of Indonesia Number 3 of 2020 concerning the National Standards of Higher Education;
8. Decree of the Minister of Education and Culture of the Republic of Indonesia Number 74/P/2021 concerning Credit Adjustment;
9. Regulation of Universitas Brawijaya Number 1 of 2017 concerning Quality Standards;
10. Rector's Regulation of Universitas Brawijaya Number 52 of 2018 concerning Scientific Publication as Academic Final Project in Master's and Doctoral Program;
11. Rector's Regulation of Universitas Brawijaya Number 25 of 2020 concerning Organizational Structure and Work Scheme;
12. Rector's Regulation of Universitas Brawijaya Number 34 of 2020 concerning Curriculum of the Study Program of *Merdeka Belajar-Kampus Merdeka*;
13. Rector's Regulation of Universitas Brawijaya Number 64 of 2022 concerning

Establishment of Education at Universitas Brawijaya of Academic Year 2022-2023;

In View of **:**

1. Meeting Outcomes involving the team of Education Guidelines of the Faculty of Engineering Universitas Brawijaya of Academic Year 2022 – 2023 within the period of July – August 2022;
2. The notion contributed by the Director of the Faculty of Engineering in the meeting within the period of January – August 2022;
3. Education Guidelines of Universitas Brawijaya of Academic Year 2022-2023;

HAS DECIDED:

To enact **:**

1. Education Guidelines of the Faculty of Engineering Universitas Brwaijaya of Academic Year 2022-2023, as attached, serves as the primary reference for all units responsible for performing academic agenda at the Faculty of Engineering Universitas Brawijaya.
2. The Education Guidelines of the Faculty of Engineering, Universitas Brawijaya for the Academic Year 2022-2023 are intended for students starting from the Odd Semester of the Academic Year 2022-2023. Regarding the determination of credit acquisition for students from previous cohorts, a transition will be made according to the Transitional Regulations in each Department/Study Program.
3. This decision shall take effect as of the date of its enactment and shall be subject to necessary amendments in case of any errors in its determination

Stipulated in Malang
1 September 2022
Dean,

Sgn

Prof. Ir. Hadi Suyono, ST., MT., Ph.D., IPU., ASEANEng.
NIP. 19730520 200801 1 013

EDUCATION GUIDELINES FACULTY OF ENGINEERING UNIVERSITAS BRAWIJAYA OF ACADEMIC YEAR 2022-2023

CHAPTER I GENERAL PROVISIONS

Article 1

In these guidelines, the following terms are defined:

1. Semester Credit System (SKS) represents a measure of student workload, workload of a Study Program, and teaching workload of lecturers.
2. Credit is a unit or measure that quantitatively represents the content of a course.
3. Credit value represents the effort required to complete tasks expressed in course activities, practical work, fieldwork, or other assignments.
4. Semester system is an educational program management system that uses the smallest unit of time to indicate the duration of an educational activity in a specific level/program of education.
5. One regular semester is equivalent to 16 working weeks, including effective teaching weeks, final exams, or up to 19 working weeks including re-evaluation period and silent weeks.
6. One interim semester is equivalent to 16 effective teaching sessions, including final exams.
7. Education in one semester consists of teaching activities, seminars, practical work, fieldwork, in face-to-face format, as well as structured and independent academic activities, or independent learning activities.
8. Indonesian National Qualifications Framework (KKNI) serves as a reference for grading competency qualifications that compare, equate, and integrate between vocational training fields and work experiences to recognize work competence according to the job structure in various sectors.
9. Curriculum is a set of plans and arrangements regarding objectives, content, and teaching materials, as well as methods used as guidelines for conducting learning activities to achieve Higher Education goals.
10. Outcome Based Education (OBE) is an education process that focuses on specific achievement outcomes oriented towards knowledge, skills, and behaviors. The OBE process includes curriculum structure, assessment, and reporting in the educational process to reflect lifelong learning abilities.
11. *Merdeka Belajar Kampus Merdeka* (MBKM) is a policy of the minister of Education and Culture through the Regulation of the Ministry of Education and Culture No. 3 of 2020 concerning National Standards for Higher Education, which grants students the right to study for 3 semesters outside their Study Program.
12. Competence is a set of intelligent, responsible actions possessed by an individual as a requirement to be considered capable by society in performing tasks in a specific job field.
13. Graduate competency standards are the qualifications of graduates that encompass attitudes, knowledge, and skills.
14. Lecture is a learning activity conducted between lecturers and students according to a schedule in class or at a designated location.

15. Structured assignment is a learning activity involving the deepening of materials for students, designed by lecturers to achieve competencies, with assignment completion time determined by lecturers.
16. Independent assignment (unstructured) is a learning activity involving the deepening of material for students, designed by lecturers to achieve competencies. The assignment completion time is determined by students.
17. Seminar is a scholarly meeting related to a course organized by students under the guidance of lecturers.
18. Laboratory/studio activities are structured academic activities conducted in laboratories/studios or at designated locations.
19. Community Service (PKM) is a student activity under the guidance of a lecturer aimed at utilizing science and technology to advance community welfare and enhance national development.
20. *Merdeka Belajar* (Independent Learning) is a policy that grants undergraduate students the right of study for 3 semesters outside their Study Program.
21. Field Work Practice (PKL) is a structured academic activity carried out in companies, projects, and/or institutions approved by the Head of Department/Study Program.
22. Mid-Semester examination is an evaluation activity conducted during the middle of the semester.
23. End-Semester examination is an evaluation activity conducted at the end of the semester.
24. Grade Point Average (GPA) is a number indicating a student's performance in the courses taken in one semester, calculated by the sum of credits for each course multiplied by the grade weight obtained, divided by the total credits taken.
25. Grade Point Average (GPA) is a number indicating a student's performance in all courses taken, calculated by the sum of credits for each course multiplied by the grade weight obtained, divided by the total credit taken.
26. Undergraduate Final Examination is the Final Project/Thesis Examination.
27. Master's Final Examination is the Thesis Defense.
28. Doctoral Final Examination consists of a Closed Examination and an Open Examination.
29. Study Plan Card (KRS) is a record of a student's academic program plan for a semester.
30. Transcript of Academic Records (KHS) is a record of a student's academic achievements issued at the end of each semester.
31. Matriculation is a learning activity conducted before entering the learning program according to the needs of the Master's or Doctoral Program in terms of Students' competencies and readiness.
32. University refers to Universitas Brawijaya.
33. Rector refers to the Rector of Universitas Brawijaya.
34. Faculty refers to the Faculty of Engineering at Universitas Brawijaya.
35. Department refers to the Departments within the Faculty of Engineering at Universitas Brawijaya.
36. Study Program refers to the Programs of Study within the Faculty of Engineering at Universitas Brawijaya.
37. Dean refers to the Dean of the Faculty of Engineering at Universitas Brawijaya.

38. The Head of Department/Study Program Chair refers to the Chair of the Departments/Programs of Study within the Faculty of Engineering at Universitas Brawijaya.
39. Lecturers refers to lecturers at the faculty of Engineering at Universitas Brawijaya. Lecturers are professional educators and researchers with the main task of transforming, developing, and disseminating knowledge and technology through education, research, and community service.
40. Academic staff refers to the staff of the Faculty of Engineering at Universitas Brawijaya. Academic staff are members of the community who dedicate themselves and are appointed to assist in higher education.
41. Student refers to students at the Faculty of Engineering at Universitas Brawijaya.

CHAPTER II OBJECTIVES OF ENGINEERING EDUCATION

Article 2

1. The educational objectives of the Faculty of Engineering are to
   a. Develop students' potential to become individuals who are faithful and devoted to the Almighty God, morally upright, healthy, knowledgeable, skilled, creative, independent, competent, and cultured for the benefit of the nation;
   b. Produce graduates who master branches of Science and/or Technology to meet national needs and enhance the nation's competitiveness;
   c. Generate science and technology through research that considers and applies humanistic values for the benefit of national progress, as well as the advancement of civilization and the welfare of humanity; and
   d. Realize community service based on reasoning and beneficial research work to advance public welfare and develop the nation's intellectual life.
2. The specific objectives of undergraduate education comprise the following criteria:
   2.1 Attitude
      a. Devotion to the Almighty God and the ability to demonstrate religious attitudes.
      b. Upholding the value of humanity in carrying out duties based on religion, morality, and ethics.
      c. Contributing to the improvement of community life, nation, state, and civilization based on Pancasila.
      d. Acting as proud citizens with love for the homeland, possessing nationalism, and a sense of responsibility towards the state and nation.
      e. Respecting cultural diversity, views, religions, beliefs, as well as the opinions or novel discoveries of others.
      f. Collaborating and possessing social sensitivity and concern for society and the environment.
      g. Observing the law and discipline in social and national life.
      h. Internalizing academic values, norms, and ethics.
      i. Demonstrating responsibility for work in their field of expertise independently.
      j. Internalizing the spirit of independence, struggle, and entrepreneurship
   2.2 General Skills

a. Capability to apply logical, critical, systematic, and innovative thinking in the context of developing or implementing science and technology while considering and applying humanitarian values relevant to their field of expertise.
b. Capability to demonstrate independent, high-quality, and measurable performance.
c. Capability to examine the implications of the development or implementation of science and technology while considering and applying humanitarian values according to their expertise, based on scientific principles, procedures, and ethics in order to generate solutions, ideas, designs, or art critiques, and compose a scientific description of their study results in the form of a thesis or final project report, and uploading it to the university's website.
d. Capability to compile a scientific description of the above study results in the form of a thesis or final project report and upload it to the university's website.
e. Capability to make accurate decisions in the context of problem-solving in their field of expertise based on the analysis of information and data.
f. Capability to maintain and develop a network of work relationships with mentors, colleagues, peers both within and outside their institution.
g. Capability to take responsibility for achieving the group's work results and to supervise and evaluate the completion of tasks assigned to subordinates.
h. Capability to conduct self-evaluation processes for workgroups under their responsibility, and manage learning independently.
i. Capability to document, store, secure, and retrieve data to ensure validity and prevent plagiarism.

3. Specific Objectives of Engineer Professional Education (levels 7 and 8 of KKNI) cover the following criteria:
    a. Capable to work in the core area of expertise for specific job types and possess work competencies equivalent to the standards of their profession's work competence.
    b. Capability to make independent decisions in carrying out their professional work based on logical, critical, systematic, and creative thinking.
    c. Capability to communicate thoughts/arguments or innovative work beneficial for the development of the profession and entrepreneurship, which can be scientifically and ethically accounted for, to the community, especially their professional community.
    d. Capability to critically evaluate the work results and decisions made in performing their duties by themselves and by their peers.
    e. Capability to enhance their professional skills in specialized fields through training and work experience.
    f. Capability to enhance the quality of resources for the development of strategic organizational programs.
    g. Capability to lead a team to solve problems in their professional field.
    h. Capability to collaborate with other professions in solving job-related problems in their professional field.
    i. Capability to develop and maintain work networks with professional communities and clients.

j. Capability to take responsibility for work in their professional field in accordance with their professional code of ethics.
k. Capability to enhance self-learning capacity.
l. Capability to contribute to the evaluation or development of national policies aimed at improving the quality of professional education or developing national policies in their professional field.
m. Capability to document, store, audit, secure, and retrieve data and information for the purpose of developing their professional work results.

4. Specific Objectives of Master's Education comprise the following criteria:
    a. Capability to develop logical, critical, systematic, and creative thinking through scientific research, creation of designs or works of art in the field of science and technology that consider and apply humanistic values according to their field of expertise, formulate scientific concepts and study results based on scientific principles, procedures, and ethics in the form of a thesis or equivalent form, and upload them to the university's website, as well as papers published in accredited scientific journals or accepted in international journals.
    b. Capability to conduct academic validation or studies relevant to their field of expertise in addressing problems in society or relevant industries through the development of knowledge and expertise.
    c. Capability to formulate ideas, thoughts, and scientific arguments responsibly and based on academic ethics, and communicating them through media to the academic community and the general public.
    d. Capability to identify the scientific fields as the object of their research and position them on a research map developed through interdisciplinary or multidisciplinary approaches.
    e. Capability to make decisions in the context of solving problems in the development of science and technology that consider and apply humanistic values based on analytical or experimental studies of information and data.
    f. Capability to manage, develop, and maintain a network of colleagues, peers within the institution, and the broader research community.
    g. Capability to enhance self-learning capacity.
    h. Capability to document, store, secure, and retrieve research data to ensure authenticity and prevent plagiarism.
5. The Specific Objectives of Doctoral Education comprise the following criteria:
    a. Capability to discover or develop new scientific theories/concepts/ideas, contribute to the development and application of science and/or technology that considers and applies humanistic values in their field of expertise by producing scientific research based on scientific methodology, logical, critical, systematic, and creative thinking.
    b. Capability to develop interdisciplinary, multidisciplinary, or transdisciplinary research, including theoretical and/or experimental studies in scientific, technological, artistic, and innovative fields embodied in the form of a dissertation, and papers published in reputable international journals.

c. Capability to select appropriate, current, advanced research, and provide benefits to humanity through interdisciplinary, multidisciplinary, or transdisciplinary approaches in order to develop and/or produce solutions to problems in scientific, technological, artistic, or societal fields, based on studies of the availability of internal and external resources.
d. Capability to develop a research roadmap with an interdisciplinary, multidisciplinary, or transdisciplinary approach based on studies of the main research targets and their constellations in broader targets.
e. Capability to formulate arguments and solutions in science, technology, or art based on critical views of facts, concepts, principles, or theories that can be scientifically and academically justified, and communicate them through mass media or directly to the public.
f. Capability to demonstrate academic leadership in the management, development, and nurturing of resources and organizations under their responsibility.
g. Capability to manage, store, audit, secure, and retrieve data and information from research under their responsibility.
h. Capability to develop and maintain collegial and peer relationships within their own environment or through collaboration networks with research communities outside the institution.

6. The Objectives of Specific Education for each Department/Study Program are regulated under Department curriculum in this Education Guidelines.

CHAPTER III EDUCATION SYSTEM

Article 3

The Objectives and Document of Curriculum

1. The faculty implements the Outcome-Based Education (OBE) curriculum with a Semester Credit System that produces learning outcomes in accordance with the qualifications specified in the KKNI and SNPT.
2. The objectives of implementing the OBE curriculum with the Semester Credit System are as follows:
   a. Providing opportunities for capable and diligent students to complete their studies in the shortest possible time.
   b. Allowing students to take courses that match their interests, talents, and abilities.
   c. Allowing for the implementation of an educational system with diverse inputs and outputs.
   d. Facilitating curriculum adjustments over time to keep up with the rapidly evolving fields of science and technology.
   e. Ensuring that the system for evaluating students' learning progress can be conducted optimally.
   f. Allowing for the transfer of credits between study programs or faculties within the university or between universities.

g. Enabling student transfers from one university to another or from one study program to another within a specific university.
h. The Semester Credit Unit (SKS) is the measure of the time allocated to student learning activities per week per semester in the learning process through various forms of learning or the recognition of student efforts in participating in curricular activities in a study program.
i. Each course or other academic activity offered in each semester has a Semester Credit Unit (SKS) indicating the weight or workload of the activities in that course.

3. The objectives of implementing the KKNI are to align the abilities of graduates with those of other countries in various professional sectors and fields of expertise with minimum standard learning outcomes.
4. The process of curriculum development for study programs, especially Bachelor and Applied Bachelor programs, refers to the Regulations of the Rector of Universitas Brawijaya Number 34 of 2020 concerning the Curriculum of *Merdeka Belajar – Kampus Merdeka*.

Semester Credit Unit

1. The student workload, lecturer workload, and the organization of Departments/Study Programs are expressed in Semester Credit Units (sks).
2. One (1) credit in learning encompasses three forms of activities as follows:
   a. Learning processes such as lectures, review sessions, or tutorials consist of:
      - Face-to-face learning activities 50 (fifty) minutes per week per semester;
      - Structured assignment activities 60 (sixty) minutes per week per semester; and
      - Independent activities 60 (sixty) minutes per week per semester.
   b. Learning processes such as seminars or similar forms consist of:
      - Learning process activities 100 (one hundred) minutes per week per semester; and
      - Independent activities 70 (seventy) minutes per week per semester.
   c. Learning processes such as laboratory work, field studies, internships, research, and similar activities include:
      - Value of 1 (one) credit for laboratory workshops/studios within the campus equivalent to 170 minutes per week for one semester.
      - Value of 1 (one) credit for field trips equivalent to 170 minutes per week for one semester.
      - Value of 1 (one) credit for internships/entrepreneurship/independent research/teaching assistance/independent projects/community service/humanitarian projects equivalent to 170 minutes per week for one semester.
      - Thesis as a research activity in the Master's program equivalent to a minimum of 9 credits (9 x 170 minutes) per week, per semester.
      - Dissertation as a research activity in the Doctoral program equivalent to a minimum of 28 credits (28 x 170 minutes) per week, per semester.

Article 5

Study Load and Study Duration

1. The student workload for the Bachelor's education program as a prerequisite for completing their studies at the Faculty comprises a minimum of 144 credits and a maximum of 160 credits, with the following composition of courses:
   a. General Compulsory Courses: 8 credits, consisting of:

      i. Religion: 2 credits
      - Islam (MPK60001)
      - Catholicism (MPK60002)
      - Protestantism (MPK60003)
      - Hinduism (MPK60004)
      - Buddhism (MPK60005)

      ii. Civics: 2 credits (MPK60006)
      iii. Bahasa Indonesia: 2 credits (MPK60007)
      iv. Pancasila: 2 credits (MPK60008)
   b. University Compulsory Courses: 14 credits, consisting of:
      i. Final Project/Thesis: 6 credits (UBU60001)
      ii. Community Service: 4 credits (UBU60005)
      iii. Entrepreneurship: 2 credits (UBU60003)

      iv. English: 2 credits (UBU60004)

   c. Professional Courses: minimum of 122 credits - 138 credits, consisting of compulsory and elective courses from the Study Program.
   d. Faculty Compulsory Courses: 6 credits, consisting of:
      i. Professional Ethics: 2 credits (FTA60001)
      ii. Fieldwork Practice: 4 credits (FTA60002)
   e. Cross-Faculty Courses can be taken up to a maximum of 20 credits per student.
   f. Curriculum actualization is conducted considering the needs of the Study Program while adhering to the rule of a total of 144-160 credits.
2. The duration of study for students of undergraduate education program can be completed in less than 4 years (8 semesters), and a maximum of 7 years (14 semesters), which is aligned with UB's internal quality assurance system. There is no extension of study duration for the students of undergraduate education program.
3. The student workload for the Master's education program as a prerequisite for completing their studies at the Faculty comprises a minimum of 36 credits, with the following course composition:
   a. University Compulsory Courses: 12 - 18 credits, consisting of:
      i. Research Methods and Scientific Writing (3 credits).
      ii. Thesis (9 - 15 credits)

b. Study Program Compulsory Courses, according to each Study Program, requires 9 -12 credits.
c. Elective Courses: 9 - 15 credits.
d. Total workload for coursework: 24 - 40 credits.
e. Maximum workload per semester: 18 credits.
f. Producing published scientific publications (according to Rector's Regulation Number 52 of 2018) minimum:
   i. 1 (one) scientific article in international journals indexed by Scopus or Web of Science Core Collection (Thomson Reuters); or
   ii. 1 (one) scientific article in national journals accredited at least Sinta 2; or
   iii. 1 (one) scientific article in UB journals designated by the Rector; or
   iv. 1 (one) scientific article in Scopus-indexed proceedings. Before graduation, the publication status must be "published." Scientific article publications are subject to approval from the supervisor and must use Universitas Brawijaya affiliation. Further regulations regarding scientific publications are determined by each Study Program.

4. Matriculation can be done before entering formal learning programs according to the needs of the Study Program for student competencies and readiness. The maximum credit load for matriculation is 12 credits, in addition to the 36 credits for the Master's program.
5. The duration of study for Master's education program students can be completed in less than 2 years (4 semesters), and a maximum of 4 years (8 semesters), aligned with UB's internal quality assurance system. There is no extension of study duration for the students of Master's education program.
6. The student workload for the Doctoral education program as a prerequisite for completing their studies at the Faculty comprises a minimum of 42 credits for students with a related Master's degree, or a maximum of 52 credits for students with a non-related Master's degree, with the following course composition:
   a. University Compulsory Courses include:
      i. Research Methods and Scientific Writing (3 - 4 credits)
      ii. Dissertation (28 - 32 credits)
   b. Study Program Compulsory Courses (according to each Study Program) 9 - 12 credits.
   c. Supporting Dissertation Elective Courses: 0 - 12 credits
   d. Total workload for coursework: 16 - 28 credits
   e. Maximum workload per semester: 18 credits.
   f. Producing published scientific publications (according to Rector's Regulation Number 52 of 2018) minimum:
      i. 2 (two) scientific articles in international journals indexed by Scopus or Web of Science Core Collection (Thomson Reuters) with a minimum Impact Factor of 0.1 or indexed by Microsoft Academic Research; or
      ii. 1 (one) scientific article in journals as referred to in point (i) and 1 (one) article in proceedings according to Rector's Regulation No. 52 of 2018. In the 2 published scientific articles, the student must be the first author at least once and the corresponding author once, subject to approval from the supervisor. Scientific article publications must use

Universitas Brawijaya affiliation. Further regulations regarding scientific publications are determined by each Study Program.

7. Matriculation can be carried out before entering the formal learning program according to the Study Program's needs for student competencies and readiness.
8. The student workload for the Engineer Professional Program (PPI) as a prerequisite for completing their studies at the Faculty takes a minimum of 24 credits, with the course composition regulated by the PPI Study Program. The maximum duration of study for the students attending PPI Study Program takes 1 semester for the Recognition of Prior Learning (RPL) system or 2 semesters for the regular program.
9. The workload for the first year of new undergraduate students in the education program is determined by each Department/Study Program, ranging from 12 - 24 credits per semester based on course packages. The workload for the first semester of new Master's and doctoral education program students is determined by each Study Program, ranging from 12 - 18 credits per semester based on course packages.
10. The workload for the first and second semesters is determined equally for each student, then the workload for subsequent semesters is determined based on the GPA achieved in the previous semester. The workload that a student can take starting from the third semester is determined based on the Semester Grade Point Average (GPA) from one semester prior, with the following provisions:

Grade of Previous Semester	**Maximum Study Load in the Following Semester**	
	Bachelor's Program (Sarjana)	**Master's Program (Magister)/Doctoral Program**
IP $\geq$ 3.50	24 credits	24 credits
3.00 $\leq$ IP < 3.50	24 credits	18 credits
2.50 $\leq$ IP <3.00	21 credits	15 credits
2.00 $\leq$ IP < 2.50	18 credits	12 credits
1.50 $\leq$ IP < 2.00	15 credits	-
IP < 1.50	$\leq$ 12 credits	-

Article 6

Learning Implementation

1. Learning implementation refers to the Semester Learning Plan (RPS) prepared by lecturers in a team, approved by the Department/Study Program, and communicated openly to students at the beginning of the course.
2. The RPS must include at least: (a) the name of the Study Program, name and code of the course, semester, credit units, and the name of the lecturer; (b) the learning outcomes assigned

to the course; (c) the final skills planned at each learning stage to meet the learning outcomes; (d) related study materials associated with the skills to be achieved; (e) forms and methods of learning; (f) time allocated to achieve skills at each learning stage; (g) student learning experiences manifested in task descriptions to be completed by students during one semester; (h) assessment criteria, indicators, and weights; and (i) a list of references used.

3. Learning implementation focuses on efforts to enhance students' willingness and ability to seek, acquire, and process knowledge and technology.
4. Learning implementation can take various forms such as lectures, quizzes and tutorials, seminars, laboratory/studio/workshop/field practices, internships, research/design/development, military training, student exchanges, internships, entrepreneurship, and/or other forms of community service.
5. Learning can be conducted within and outside the Study Program, including:
   a. Learning in other Study Programs at the same university;
   b. Learning in the same Study Program at different universities;
   c. Learning in other Study Programs at different universities; and
   d. Learning in non-university institutions. Learning processes outside the Study Program are only implemented for Bachelor's and Applied Bachelor's education programs, following the program of *Merdeka Belajar-Kampus Merdeka* (MBKM) policy at the Ministry of Education, Culture, Research, and Technology.
6. Learning can be conducted through a combination of synchronous, asynchronous, online, and offline methods in accordance with university and faculty regulations.
7. To improve the quality of learning implementation, at the Faculty level, it is assisted by the Quality Assurance Cluster (GJM), and at the Department/Program Study level, it is assisted by the Quality Assurance Unit (UJM).

Article 7

Student Academic Performance Assessment

1. The assessment of student academic success aims to evaluate their attitudes, understanding, and mastery of the material presented in a course.
2. The assessment of student academic success is conducted by obtaining information about the extent to which students have achieved the objectives formulated in the curriculum through structured assignments, quizzes, mid-semester examinations, end-semester examinations, laboratory work assessments, and others. In certain courses, assessment may be supplemented by practical activities.
3. Mid-semester and end-semester exams are conducted according to the schedule specified in the academic calendar.
4. Assessment through structured assignments, quizzes, mid-semester examinations, end-semester examinations, laboratory work exams, and others is intended to determine the Final Grade (NA) with specific weighting. NA is determined with a minimum of 3 assessment components, one of which is the mid-semester examinations and end-semester examinations.
5. Lecturers are required to transparently communicate evaluation details to students.

6. Assessment in the implementation of Merdeka *Belajar-Kampus Merdeka* (MBKM) is separately regulated in the Guidelines for the Implementation of MBKM at Universitas Brawijaya.

Article 8

Assessment Guidelines

1. The assessment of student academic success for each course is based on Reference Benchmark Assessment (PAP), which involves determining the passing threshold.
2. The calculation of the Final Grade (NA) is performed by assigning weights to each academic activity in that semester using the following formula:

$$NA = \frac{\sum_{i=1}^{n} Bt_i.Nt_i + Bq_i.Nq_i + Bm.Nm + Ba.Na + Bp.Np}{\sum_{i=1}^{n} Bt_i + bq_i + Bm + Ba + Bp}$$

Where,

Bt_i: mark obtained from structured assignment of *i*
Bq_i : mark obtained from a quiz of *i*
Bm : mark obtained from mid-semester exam
Ba: mark obtained from end-semester exam
Bp: mark obtained from laboratory work/practical work
Nt_i, Nq_i, *Nm*, *Na*, *Np* : mark of each academic activity

3. The weight of an assessment activity for a course is determined by balancing the content of the activity with the overall course content for one semester.
4. The NA in point 2, which is in numerical value, is then converted into a Letter representing a grade (HM) and a number representing Quality Points (AM) according to the following equivalence:

Grade	**Symbol**	**Category**	
		Bachelor's Program (*Sarjana*)	**Master's (*Magister*)/Doctoral Program**
80< NA ≤100	A	Very Good	Very Good
75< NA ≤80	B+	Very Good - Good	Very Good - Good
69< NA ≤75	B	Good	Good
60< NA ≤69	C+	Good – Pass	Fail

55< NA ≤60	C	Pass	Fail
50< NA ≤55	D+	Pass – Fail	Fail
44< NA ≤50	D	Fail	Fail
0< NA ≤44	E	Fail	Fail

5. The Final Grade of the Course is considered valid if the student:
   a. Is officially registered as a student for the current semester.
   b. Has fulfilled the specified academic administrative requirements.
   c. Has attended a minimum of 80% of the scheduled meetings.
   d. Has the internship permission recognized as a course with a duration corresponding to the Internship permission and participates in activities for which there is a permission letter issued by at least the Head of the Department/Study Program (particularly for the students of the Bachelor's program attending internships.

Article 9

Grading

1. Students' academic success is represented by grades. Grading criteria entail semester grade and Grade Point Average.
2. In grading, both symbols and numeric values represent students' marks.

Symbol	Grade
A	4
B+	3.5
B	3
C+	2.5
C	2
D+	1.5
D	1
E	0

Grading refers to the following formula:

$$IP = \frac{\sum_{i=1}^{n} K_i \text{ x } AM_i}{\sum_{i=1}^{n} K_i}$$

Where,

IP : grade (semester grade or GPA)

K : total credits of each course

AM : grade of each course

n : the total courses taken

3. If a student has dropped a course, then that course will not be considered in calculating the Grade Point Average.
4. In calculating the Grade Point Average (GPA), each course from all semesters ever taken by the student is counted only once, and the best grade obtained in that course is taken into account, including the grades earned in the Interim Semester for undergraduate students.

Article 10

Evaluation of Academic Performance and Judicium in Bachelor's Education Program

1. Evaluation of academic performance for undergraduate students is conducted:
   a. At the end of the first year (two semesters)
   b. At the end of the second year (four semesters)
   c. At the end of the third year (six semesters)
   d. At the end of the fourth year (eight semesters)
   e. At the end of the Bachelor's Program (after accomplishing 144 credits)
   f. At the end of the study time limit (fourteen semesters).
2. Evaluation of academic success for undergraduate students at the end of the first year is an evaluation conducted after the student has completed two cumulative semesters (excluding academic leave). Students are allowed to continue their studies if they:
   a. Have accumulated at least 20 credits.
   b. Have achieved a grade point average (GPA) of at least 2.00 calculated from the best 20 credits of courses.
3. Evaluation of academic performance for undergraduate students at the end of the second year is conducted after the student has completed four cumulative semesters (excluding academic leave). Students are still allowed to continue their studies after the second year if they:
   a. Have accumulated at least 48 credits.
   b. Have achieved a GPA of at least 2.00 calculated from the best 48 credits of courses.
4. Evaluation of academic success for undergraduate students at the end of the third year is an evaluation conducted after the student has completed six cumulative semesters (excluding academic leave). Students are still allowed to continue their studies after the third year if they:

a. Have completed at least 72 credits.
b. Have achieved a GPA of at least 2.00 calculated from the best 72 credits of courses.

5. Evaluation of academic performance for undergraduate students at the end of the fourth year is conducted after the student has completed eight cumulative semesters (excluding academic leave). Students are still allowed to continue their studies after the fourth year if they:
   a. Have accumulated at least 96 credits.
   b. Have achieved a GPA of at least 2.00 calculated from the best 96 credits of courses.
   c. For the final project/thesis, evaluation will be conducted every semester through mechanisms set by each Study Program.
6. Students of bachelor's education program is considered to have completed the coursework in a Department/Study Program if they have accumulated a total credit value of 144-160 credits, subject to the following conditions:
   a. Grade Point Average (GPA) of at least 2.00.
   b. Grades of D/D+ do not exceed 10% of the total credit load, except for certain courses that are not allowed to receive D/D+ grades as stipulated in the Faculty/Study Program Education Guidelines.
   c. No grade of E.
   d. Passing the final project/thesis and upload the final project/thesis to the university repository integrated into the student final project/thesis repository portal (rama.kemdikbud.go.id), unless published in a journal.
   e. Fulfilling other requirements determined by the Faculty.
   f. If the GPA achieved is less than 2.00, the student must improve the course grades as long as the study period limit has not been exceeded. Improvements must be made in the next semester when the courses to be improved are offered. The highest grade achieved will be used for evaluation for each course improved.
7. Students are allowed to participate in the graduation examination (*judicium*) if they are free from obligations (financial, academic, library, etc.), have a certificate of completion of the *PK2 Maba* (freshman orientation) program, have a certificate of English proficiency test from an institution recognized by the Faculty, and other documents according to the graduation examination procedure determined by the Faculty. Detailed graduation examination procedures can be accessed on the Faculty's website.
8. Graduation honors are awarded based on Grade Point Average (GPA). The determination of honors also considers a maximum study period of 4 years, never being subjected to disciplinary or academic sanctions, and no grade of C+ (minimum B). The graduation honors are specified as follows:
   - GPA > 3.50 = High Distinction
   - GPA 3.01 – 3.50 = Distinction
   - GPA 2.76 – 3.00 = Merit
   - GPA 2.00 – 2.75 = -
9. The Department or Program Study periodically evaluates the academic status of students in accordance with the provisions of this Article. For students who are at the drop-out limit and/or the end of the study period, a warning letter will be issued by the relevant Department Head.

Article 11

Evaluation of Academic Performance and Judicium for Master's Education program

1. Evaluation of academic performance for graduate students in the education program is conducted:
   a. At the end of the first semester
   b. At the end of the third semester
   c. At the end of the study period (eight semesters).
2. Students who, at the end of the first semester, fail to achieve a GPA of 3.0 for the best eight credits will receive a warning from the Department/Study Program.
3. Students who, at the end of the third semester, have not achieved a GPA of 3.0 for the best 16 credits, will be deemed to have failed and will not be allowed to continue their studies.
4. Repeating a course is only allowed once.
5. For students who have completed a minimum of 14 credits with a minimum GPA of 3.0 and have passed the Research Methodology course, they may formally propose thesis research.
6. Thesis research proposals must be approved by supervisors and defended and passed in front of the Research Proposal Evaluation Team (comprising the supervisory committee plus two examiners appointed by the Head of Department based on the proposal of the Study Program Chair).
7. The graduation examination (*judicium*) is conducted after the student has completed all academic and administrative requirements:
   a. Completing coursework, thesis, and other academic tasks with a GPA > 3.0 during the study period.
   b. Achieving at least B as the minimum grade for all courses.
   c. Fulfilling other requirements determined by the Program Study.
8. Students who pass will be declared graduating with the following criteria:
   a. Graduating with High Distinction (Cumlaude), with the following requirements:

      i. GPA > 3.75;
      ii. Publishing the thesis research results > 1 article in scientific publications in the form of proceedings indexed in Scopus and/or international scientific journals indexed in Scopus or Web of Science Core Collection (Thomson Reuter), the lowest accredited national journal Sinta 2, or UB journals designated by the Rector in accordance with the Rector's Circular Letter No. 1131/UN10/AK/2017;
      iii. Maximum study period of five semesters.
   b. Graduating with Distinction, with the following requirements:
      i. failing to meet other requirements in item (a);
      ii. GPA > 3.5.

   c. Graduating with Merit, with the following requirements:
      i. 3.0 < GPA < 3.5;
9. Graduation honors are determined by the Examination Team and validated by the Dean, and announced at the time of *Judicium*.
10. Students are considered to have failed if at least one of the following occurs:
    a. GPA < 3.0 for the best 16 credits as stipulated in the evaluation of academic success; or

b. Failure to pass the thesis proposal examination on the second attempt; or
c. Failure to pass the thesis examination on the second attempt; or
d. Exceeding the study period without completing the required coursework.

11. The Department or Study Program periodically evaluates the academic status of students in accordance with the provisions of this Article. For students who are at the drop-out limit and/or the end of the study period, a warning letter will be issued by the relevant Department Head.

Article 12

Evaluation of Academic Performance and *Judicium* for Doctoral Education Program

1. Evaluation of academic success for doctoral students in the education program is conducted:
   a. At the end of the first semester
   b. With Qualifying Examination
   c. At the end of the study period (14 semesters).
2. Students who, at the end of the first semester, fail to achieve a minimum GPA of 3.0 for the best 12 credits will be warned by the Department/Program Study.
3. Students who, at the end of the first semester, achieve a GPA of 3.00 for the best 12 credits and have no grades below B, may apply for the qualifying examination in the second semester.
4. Courses that receive grades below A may be repeated and conducted in the following semester. A course may only be repeated twice.
5. The qualifying examination is conducted to assess the academic abilities of doctoral students in the education program. The qualifying examination is conducted orally and/or in writing, and the assessment is carried out by the Qualifying Examination Faculty Examining Committee.
6. The Chair of the qualifying examination committee must hold at least the rank of Associate Professor and have a doctoral degree, while committee members must hold at least the rank of Assistant Professor and have a doctoral degree. The examining committee for each student consists of 3 - 5 faculty members. One of the examining faculty members may come from outside Universitas Brawijaya and must meet the requirements as an examiner.
7. The minimum passing standard for the qualifying examination is 70 or equivalent to a grade of B. Students who fail the qualifying examination are given the opportunity to retake it once.
8. Graduation is conducted after students fulfill all academic and administrative requirements:
   a. Having fulfilled all academic (courses and academic assignments) and administrative requirements and passed the final examination.
   b. Having uploaded a scientific publication article according to Rector's Regulation Number 52 of 2018 (proven by at least acceptance letter for publication).
   c. Having GPA > 3.0 throughout their study period.
   d. Having completed other requirements specified by the Study Program.
9. Students who graduate receive the following graduation honors:
   a. Graduating with High Distinction with the following conditions:
      i. GPA > 3.75;
      ii. Having published the results of their dissertation research > 1 article in internationally reputable scientific journals indexed in Scopus or Web of Science Core Collection

(Thomson Reuters) with a minimum impact factor of 0.1 or Microsoft Academic Search as per Rector's Regulation Number 52 of 2018;

iii. Having achieved maximum study period of eight semesters.

b. Graduating with distinction, with the following conditions:
   i. Not meeting the other requirements in point (a);
   ii. Having GPA between 3.50-3.75 (overall for courses and dissertation).
c. Graduating with Merit with the following conditions:
   i. Having GPA between 3.00-3.50 (overall for courses and dissertation).

10. The graduation honor is determined by the Examining Committee and endorsed by the Dean, and announced at the time of graduation.
11. Students are considered to have failed their study if:
    a. They fail the qualifying examination on the second attempt, or
    b. They fail the dissertation proposal defense on the second attempt, or
    c. They fail the dissertation defense on the second attempt, or
    d. Their study period expires (more than 14 semesters) and they have not completed the study load according to the applicable provisions, or
    e. They fail to re-register for three consecutive semesters.
12. The Department or Study Program conducts periodic evaluations of students' academic status in accordance with the provisions of this Article. For students who are at the dropout or end-of-study limit, a warning letter will be issued by the relevant Department Head.

Article 13

Remedial and Special Examinations

1. Remedial examinations are intended for courses with a highest grade of B, while the final grade taken is the best and maximum of B+. Bachelor's program students can take remedial examinations with the condition of having participated in all academic activities related to the course during the semester in which the course was taken. The implementation is regulated by the Department/Study Program with the approval of the Faculty.
2. Special examinations with special assignments are for Bachelor's program students in the final semester who have completed 144-160 credits and have completed their final project/thesis, but have obtained a GPA of less than 2.00 or grades of D/D+ > 10%. Special examinations are limited to a maximum of 9 credits and only once during the study period. The final result of the special examination is given a maximum grade of C. The implementation is performed by the Department/Study Program with the approval of the Faculty.
3. For Master's and Doctoral programs, the implementation of remedial examinations and their requirements are determined by each respective Study Program.

Article 14

Interim Semester Program

1. The Interim Semester Program aims to improve students' GPA, shorten the study period, and prevent dropouts. The Interim Semester provides an opportunity for students to improve grades for courses they have previously taken.

2. The Interim Semester Program is a lecture program for undergraduate education programs held between even and odd semesters (semester breaks) whose implementation is regulated at the Faculty level.
3. The implementation of the Interim Semester includes face-to-face activities, structured assignments, independent assignments, mid-semester examinations, and end-semester examinations equivalent to the workload of regular lectures.
4. The Interim Semester is held for a minimum of 8 weeks and consists of 16 face-to-face meetings including mid-semester and end-semester examinations. The timing of the Interim Semester is regulated by the Faculty.
5. The maximum credit load for courses taken during the Interim Semester is 9 credits.
6. The Interim Semester is not included in the calculation of the study period.
7. Courses that can be included in the program are those that have been previously taken. The maximum grade for repeated courses is an A.

Article 15

Merdeka Belajar Kampus Merdeka (MBKM)

1. *Merdeka Belajar – Kampus Merdeka* (MBKM) is an undergraduate education program that grants students the right to study for 3 semesters outside of their Study Program. Through this program, students will have extensive opportunities to enrich and enhance their insights and competencies in the real world according to their passions and aspirations.
2. The faculty implements the MBKM program through the Study Program curriculum, especially at the undergraduate level.
3. There are 8 options for learning forms outside of higher education institutions, including:
   a. student exchange,
   b. internships/work placements,
   c. teaching assistantships in educational units,
   d. research,
   e. humanitarian projects,
   f. entrepreneurship activities,
   g. independent studies/projects, and
   h. rural development/community service program for students
4. Study Programs within the Faculty offering the MBKM Program include:
   a. Bachelor's Program in Civil Engineering,
   b. Bachelor's Program in Mechanical Engineering,
   c. Bachelor's Program in Irrigation Engineering,
   d. Bachelor's Program in Electrical Engineering,
   e. Bachelor's Program in Architecture,
   f. Bachelor's Program in Urban and regional planning,
   g. Bachelor's Program in Industrial Engineering,
   h. Bachelor's Program in Chemical Engineering.
5. The implementation of MBKM activities is regulated as follows:

a. The implementation of 1 semester of MBKM outside of the Study Program within the University can be done gradually over several semesters,
b. The implementation of 1 semester of MBKM outside the University can be done after the 5th semester,
c. The implementation of 2 semesters of MBKM outside the University can be done after the 5th semester,
d. The implementation of 2 semesters of MBKM, consisting of 1 semester outside the Study Program within the University, can be done gradually over several semesters and 1 semester outside the University can be done after the 5th semester,
e. The implementation of 3 semesters of MBKM, consisting of 1 semester outside the Study Program within the University, can be done gradually over several semesters and 2 semesters outside the University can be done after the 5th semester.

6. The implementation of this program follows the Education Guidelines of Universitas Brawijaya for the Academic Year 2022-2023, Chapter V and the Guidelines for Implementing MBKM at Universitas Brawijaya in 2022.

Article 16

Fast Track Program

1. The Fast Track Program is an acceleration program from Bachelor's degree to Master's degree education, completed within 5 (five) years.
2. Study Programs within the Faculty offering the Fast Track Program are:
   a. Bachelor's Program in Civil Engineering –Master's Program in Civil Engineering
   b. Bachelor's Program in Mechanical Engineering –Master's Program in Mechanical Engineering
   c. Bachelor's Program in Irrigation Engineering – Master's Program in Irrigation Engineering
   d. Bachelor's Program in Electrical Engineering – Master's Program in Electrical Engineering
   e. Bachelor's Program in Architecture – Master's Program in Architecture
   f. Bachelor's Program in Urban and regional planning – Master's Program in Urban and regional planning.
3. The implementation of the Fast Track Program follows Rector’s Regulation of Universitas Brawijaya Number 19 of 2020 concerning the Acceleration Program from Bachelor's to Master's Degree and the Education Guidelines of Universitas Brawijaya for the Academic Year 2022-2023 Chapter XIII.

Article 17

Acceleration Program for Doctor of Excellence Universitas Brawijaya (PPDU-UB) and Master’s Program on the Pathway to Doctoral Program for Bachelor of Excellence (PMDSU)

1. The PPDU-UB and PMDSU programs are accelerated education programs offered to graduates holding Bachelor’s degree who qualify to become Doctors, with a study period of

4 (four) years (8 Semesters) under the guidance of experienced Promoters within Universitas Brawijaya.
2. Participants who pass the PPDU-UB program can proceed with self-funding or scholarships. Participants who pass the PMDSU program will receive funding from Directorate General of Higher Education.
3. The Study Programs within the Faculty offering PPDU-UB are:
   a. Doctoral Program in Civil Engineering
   b. Doctoral Program in Mechanical Engineering
   c. Doctoral Program in Water Resources Engineering.
4. The implementation of PPDU-UB follows the Rector's Regulation of Universitas Brawijaya Number 4 of 2021 concerning the Implementation of the Acceleration Program for Doctor of Excellence and the Education Guidelines of Universitas Brawijaya for the Academic Year 2022-2023 Chapter XIII.

Article 18

Dual Degree

1. The dual degree program awards graduation degrees from 2 (two) different Study Programs at the university, designated for students who have met the requirements.
2. Students eligible for the dual degree program are active students in 2 (two) different Study Programs within the University.
3. Prospective students must meet administrative and academic requirements and pass the entrance exams/selections of each Study Program.
4. Degrees from 2 (two) different Study Programs are awarded to students after they have completed the entire curriculum of the dual degree program in a lawful manner and in accordance with regulations.
5. All academic administrative consequences resulting from participation in the dual degree program are entirely the responsibility of the students.
6. The implementation of this program follows agreements between the relevant Faculties/Departments/Study Programs.

Article 19

Double Degree

1. The double degree program awards graduation degrees from 2 (two) Study Programs, from the University and a partner university abroad (partner institution); this program is for students who have met the requirements.
2. The implementation of this program must be based on a cooperation agreement between the University and the partner institution, and is conducted in regular classes.
3. The Study Programs within the Faculty that offer the double degree program are:
   a. Master's Program in Civil Engineering
   b. Master's Program in Mechanical Engineering
   c. Master's Program in Water Resources Engineering
   d. Master's Program in Electrical Engineering.

4. The implementation of the Double Degree Program follows the Rector's Regulation of Universitas Brawijaya Number 334/PER/2012 concerning the Implementation of the Double Degree Education Program at Universitas Brawijaya and the Education Guidelines of Universitas Brawijaya for the Academic Year 2022-2023 Chapter XII.
5. Students eligible for the double degree program are active master's students, with the registration period determined by the Department/Study Program with the approval of the Faculty.
6. Prospective students must pass the selection process to become participants in the double degree program. The selection system, which includes requirements, procedures, qualification criteria, and the list of partner institutions, is determined by the Rector.
7. During their academic activities at Universitas Brawijaya or the partner institution in the double degree program, students must be registered as active students in the chosen Study Program and comply with all academic administrative consequences resulting from participation in the double degree program.
8. To obtain 2 (two) diplomas and transcripts, students must pass all academic obligations and complete administrative requirements in the chosen Study Program at both Universitas Brawijaya and the partner institution. The diploma consists of 2 (two) sheets, one from the Study Program at Universitas Brawijaya and one from the partner institution. The transcript contains a combination of courses taken at Universitas Brawijaya and the partner institution.
9. The degree title from the partner institution follows the naming conventions enforced by that institution.

CHAPTER IV ACADEMIC ADMINISTRATION

Article 20

Student Admission

1. The selection for new students is centrally managed by the University through https://selma.ub.ac.id
2. General Admission Requirements for Master's and Doctoral Programs:
   a. Possession of a diploma and academic transcript.
   b. A bachelor's degree or its equivalent for prospective Master's program students.
   c. A Master's degree or its equivalent for prospective Doctoral program students.
   d. GPA requirements:
      - Minimum 3.0 for the Master's program.
      - Minimum 3.5 for the Doctoral program.
   e. TOEFL scores:
      - Minimum 475 for the Master's program.
      - Minimum 500 for the Doctoral program.
   f. Academic Potential Test scores:
      - Minimum 475 for the Master's program.
      - Minimum 500 for the Doctoral program.
   g. Additional provisions or requirements are set by each Study Program and can be found at https://selma.ub.ac.id.

h. Provisions and requirements for international students are announced at http://io.ub.ac.id.

3. Fast Track Program Admission Requirements:
   a. The student must be an active student at the University.
   b. The student must be in the 6th semester of the undergraduate program and have completed at least 110 credits with a GPA of (1) $\geq$ 3.50, or (2) $\geq$ 3.25 with a minimum grade of B.
   c. TOEFL score > 450.
   d. A recommendation from a doctoral-level lecturer with at least the academic rank of Assistant Professor.
   e. Approval and financial support commitment from parents/guardians and/or other parties
4. PPDU-UB Program Admission Requirements:
   a. A promoter is required to:
      1. Have clear research track record
      2. Have minimum Scopus h-index of 3 in the fields of science and technology and have been a first author/corresponding author in the past five years.
      3. Have minimum academic rank of Associate Professor and holds a Doctorate.
      4. Be no older than 65 for Professors and 61 for Doctors.
      5. Have supervised at least three doctoral students who have produced reputable international publications (either as promoter or co-promoter).
      6. Have international networking that supports the success of PPDU implementation.
   b. A student is required to:
      - Possess a bachelor's degree with the following GPA requirements:
        - For A-accredited universities and A-accredited study programs, GPA > 3.25.
        - For B-accredited universities and A-accredited study programs, GPA > 3.5.
        - For A-accredited universities and B-accredited study programs, GPA > 3.5.
        - For B-accredited universities and B-accredited study programs, GPA > 3.75.
        - For universities and study programs with accreditation below B, GPA > 3.8.
      - Be no older 24 years for non-professional graduates and 27 years for professional graduates at the time of application.
      - Obtain academic recommendations from the final project/thesis supervisor and/or experts in the relevant field.
      - Not receive PMDSU scholarships.
      - Be physically and mentally healthy, and free from drugs.
      - Be willing to participate in the PPDU education program for a maximum of four years.

Article 21

Academic Status

The academic status of students will change according to the administrative processes completed. They types of academic status for students include:

1. Not Registered: students have not completed administrative registration.
2. Registered: students have completed administrative registration.
3. Active: students have completed both administrative and academic registration.
4. Academic Leave and/or Terminated Study: it represents a postponement of student registration for a period of one semester with the Rector's permission, not counted as study time, and can be taken starting from the first semester.
5. Study Evaluation: This academic status indicates that students do not meet the academic requirements to continue their studies in the following semester.
6. Failed Studies/Drop Out: This status indicates that students who do not meet the success evaluation requirements are not registered on account of not completing registration for more than 2 (two) cumulative/consecutive semesters and violate the rules or other applicable regulations set by the university. Students with failed studies are proposed by the Department Head to the Faculty to be forwarded to the Rector, and a Rector's Decree related to Failed Studies will be issued.
7. Withdrawal/Transfer to Another University: This status indicates that students apply for withdrawal/transfer to another university. The application for withdrawal/transfer is addressed to the Rector and done online.
8. Deceased: The Department Head reports to the Faculty, which then forwards the report to the Rector if a student has passed away, attaching the supporting documents.

Article 22

Student Enrollment

1. Administrative registration involves the process to obtain registered student status at the University.
   a. Requirements for new student administrative registration: After officially being accepted as prospective students, they must fulfill the requirements and conditions pursuant to the announcement of prospective student registration to be designated as registered students.
   b. Requirements for returning student administrative registration: The requirements for returning student administrative registration are announced through the official University and Faculty websites at the end of each semester and must meet other academic requirements stipulated by each Faculty/Study Program.
2. Academic registration involves the process to obtain active status at the Faculty and the right to participate in academic activities for a particular semester. These activities include:
   a. Programming Study Plan Card (KRS) through the Student Academic Information System (SIAM): The determination of the current semester's study plan is carried out under the guidance of the appointed Academic Advisor (PA). For new students, the first and second semesters' study loads are required to follow the predetermined study load (package system). For returning students, the study load for the next semester is determined based on the GPA achieved in the previous semester.
   b. Consultation on the study plan and approval of KRS by the Academic Advisor (PA): The semester study plan approved by the PA lecturer is then validated through the Lecturer Information System (SIADO) and then recapitulated by the Department's teaching section.

c. Filling out the Study Plan Change Card (KPRS) as regulated by the Department: Changing the study plan means replacing a course with another course in the same semester. Changes to the study plan must be made no later than the end of the first week and must be approved by the PA lecturer.
d. Filling out the Course Cancellation Card (KPM) as regulated by the Department: Cancelling a course means cancelling the plan to take a course that will therefore not be examined in the relevant semester. Students who wish to cancel a course must do so no later than the second week. This cancellation must be approved by the PA lecturer and immediately reported to the Department's teaching section.
e. Receiving the Transcript of Academic Records (KHS) through the Student Academic Information System (SIAM): the KHS represent the grades obtained by students for all courses programmed in the KRS and listed in the KHS. Each semester's KHS is made in four copies, intended for the PA lecturer, the student, the student's parents/guardians, and the Department's teaching section (recording).

3. Sanctions:
   a. Prospective students who do not meet the requirements and procedures in the acceptance announcement are declared to have withdrawn as prospective students for the relevant academic year.
   b. Returning students who do not complete administrative registration in a particular semester without the Rector's approval are declared non-students for that semester, which is counted as part of their study period.
   c. Returning students who are late in administrative registration for any reason are declared not registered as active students for that semester.
   d. Returning students who are not registered as stated in point (c) can apply for academic leave to the Rector no later than 1 (one) month after the administrative registration closes.
   e. Returning students who are not registered for more than 2 (two) cumulative/consecutive semesters are declared to have failed their studies as students

Article 23

Tuition Fee Payments

1. Student tuition fees are regulated under the Rector's Regulation.
2. Every new student must pay the tuition fees according to the stipulated provisions at the time of administrative registration as a new student.
3. Tuition fee payments are made each semester during administrative registration.
4. For returning students who do not re-register without the Rector's permission, they are still required to pay tuition fees during the period they are inactive. Payment is made at the time of re-registration when they apply to reactivate their active status as students with an official letter from the Faculty addressed to the Rector.
5. If students (new/returning) obtain the Rector's permission for academic leave, they are exempt from the obligation to pay tuition fees during the academic leave period. They can obtain a tuition fee waiver at the central finance department by showing the academic leave approval letter.

6. If students (new/returning) obtain the Rector's permission for Terminated Study, they are still required to pay tuition fees during the Terminated Study period.

Article 25

Student Identification Card

1. The Student Identification Card (KTM) serves as proof of registered student status.
2. The KTM is issued when new students have completed the registration process.
3. The KTM can be collected at the Faculty's Academic Section.
4. The KTM is valid as long as the student is registered.
5. Exchange or collaboration students at the University will receive a special student card valid for the duration of their exchange or collaboration at the University.
6. If the KTM is lost, damaged, or contains data errors, students can request a reprint of the KTM in accordance with the University's existing provisions and procedures.

Article 25

Student Transfers

1. Student transfers within the University or from other State Universities (PTN) to the University must be within the same level of education and meet the established requirements.
2. The requirements and procedures for student transfers follow the Education Guidelines of Universitas Brawijaya for the Academic Year 2022/2023, Subchapter 14.5.

Article 26

Academic Agenda

Students are required to attend lectures, seminars, laboratory work, and similar academic activities in accordance with their study plan in an orderly and regular manner according to the applicable regulations. The schedule for lectures and laboratory work is arranged by the Study Program and may be conducted from 06:00 to 09:00.

Article 27

Academic Advisors (PA) and Student Counsellors (BK)

1. An Academic Advisor (PA) is a lecturer who provides academic advice to students according to their Study Program to enhance their academic abilities, ensuring that their Study Program is completed successfully.

2. The duties of a PA include:
    a. Providing information on the use of facilities and infrastructure supporting academic and non-academic activities.
    b. Assisting students in surmounting academic problems.
    c. Helping students develop good study habits and attitudes (learning skills) to foster independent learning for their success as experts.
    d. Recommending the level of students' academic success for specific purposes.
    e. Assisting students in developing a well-rounded personality in line with religious, national, cultural, and other positive values.
    f. Helping students develop lifelong independent learning perspectives.
    g. Warning students who are subject to academic evaluations in accordance with student success evaluation regulations.
    h. Guiding students interested in MBKM programs, fast track, PPDU-UB, dual degree, and double degree programs.
3. A PA is responsible for:
    a. Processing the completion of the Study Plan Card (KRS) and being accountable for its accuracy.
    b. Determining the correct number of credits students may take in the relevant semester, considering applicable regulations.
    c. Reviewing and approving the student's study plan each semester as outlined in the KRS.
    d. Explaining the decisions regarding the study load to ensure students understand and accept the responsibilities related to the number of credits and courses taken.
4. Other provisions related to the duties of a PA involve the following:
    a. Each semester, PAs must consider the individual or group learning outcomes of their advisees.
    b. PAs may seek assistance from other work units (such as BK) for advisement.
    c. Academic guidance is coordinated by the Vice Dean I, while non-academic issues are coordinated by the Vice Dean III.
    d. Every PA must always adhere to the Campus Life Code of Ethics.
    e. The administration of advisement is managed by the Study Program.
    f. Each PA must report their duties regularly to the Department leadership.
    g. The Department leadership must consider the rights of PAs.
5. Guidance and Counseling (BK) is a systematic and intensive assistance process provided by specialists to students for personal, social, and learning skills development (learning skills) for their future careers, conducted by a team at the Faculty and University levels specifically designated for this purpose.
6. BK services at the Faculty are coordinated by the Vice Dean III, with further information available through the Faculty Student Affairs Department.

Article 28

Mid-Semester and End-Semester Examinations

1. Course examinations include the Mid-Semester examinations (UTS) and End-Semester Examinations (UAS), conducted according to the academic calendar and announced to the academic community of the Faculty. The schedule for UTS and UAS for the regular program must be announced at least one week before the examinations begin.
2. UTS and UAS for the regular program are organized by a committee appointed by the Dean.
3. Students can take examinations if they have attended at least 80% of the semester's lectures and fulfilled other requirements. Students who do not meet the requirements in point (3) cannot take the examinations, and all grades obtained for that course are nullified and the course credits are calculated in the GPA.
4. The lecturer of the course must submit the Final Grades to the Head of the Study Program within the specified deadline and no later than one week after the UAS is conducted. If the course instructor does not submit the grades within the specified deadline, the Final Grades will be determined by the Head of Department/Study Program.
5. If a student cannot take UAS due to a verifiable reason, the Department may hold a makeup examination within a deadline set by the Head of Department/Study Program.
6. Remedial and special examinations are intended to improve the final grade of a previously taken course. To be eligible for remedial examinations, students must participate in all academic activities related to the course in the semester the course is taken. Remedial examinations are available for courses with a maximum grade of B, and the final grade taken will be the best one, up to a maximum of B+.

Article 29

Application for Academic Leave and/or Terminated Study

1. Academic leave must be applied for no later than 1 (one) month after the end of the re-registration period and is not subject to tuition fees for the semester applied for.
2. Terminated study must be applied for when it exceeds 1 (one) month after the end of the re-registration period and is subject to tuition fees for the semester applied for.
3. Applications for academic leave and/or terminated study are submitted online by the student concerned. Academic leave must receive written approval from the Rector. To resume academic activities, the student must submit a letter of application to the Rector to become active and re-register in accordance with applicable academic regulations.
4. Applications for academic leave and/or terminated study can be made for a maximum of 4 (four) semesters for vocational and undergraduate programs; a maximum of 2 (two) semesters for postgraduate programs. Students in fast track, PPDU-UB, or double degree programs are not allowed to apply for academic leave.
5. Applications for academic leave and/or terminated study are made per semester, and students are entitled to apply starting from the first semester.
6. Academic leave and/or terminated study can be taken by students with Active, Registered, Academic Leave, and Terminated Study (from the previous semester) status and who are still within their study period.
7. During the period of academic leave and/or terminated study, students are not permitted to undertake registered academic activities.

8. Retroactive academic leave and/or terminated study (for previous semesters) is not allowed.
9. The academic status of students on academic leave and/or terminated study in the system is referred to as terminated study (adjusting to the academic status in *PD Dikti*).

Article 30

Evaluation of Academic Performance

1. The Department or Study Program conducts periodic evaluations of students' academic status in accordance with the provisions set out in Article 10 for Undergraduate Programs, Article 11 for Master's Programs, and Article 12 for Doctoral Programs.
2. Academic performance evaluation is conducted at the end of each semester, covering the courses taken by students during that semester. This evaluation result is primarily used to determine the study load that may be taken in the next semester based on the provisions of the semester GPA.
3. Students who do not meet the evaluation requirements will be given a notification letter and will not be able to continue their studies in the next semester, and their guardians will be informed.
4. Students approaching one semester before the drop-out limit and/or the end of their study period will receive a warning letter issued by the Head of the relevant Department to both the student and their guardian.
5. The actualization of study evaluations is carried out according to the needs of the Study Program while still considering the applicable regulations.

Article 31

Application for Withdrawal/Transfer to Another University

1. Students submit a withdrawal application online by uploading a withdrawal letter acknowledged by their parents/guardians.
2. The application is validated by the Department and Faculty by uploading the withdrawal approval letter from the authorized leaders in the Department and Faculty if the withdrawal requirements have been met (cleared financial obligations, library, etc.).
3. The application is validated by the University by uploading the withdrawal approval letter from the Rector if the withdrawal requirements have been met (cleared financial obligations, library, etc.).
4. The original withdrawal certificate from the Rector can be collected directly by the student at the University and the original student ID card (KTM) must be submitted.
5. Withdrawal cannot be undone.

Article 32

Graduation Ceremony

1. Students can participate in the graduation ceremony if they have undergone the graduation assessment (*judicium*) and been declared to have passed a specific educational program and have met the graduation requirements.
2. Students who have completed their educational program are required to attend the graduation ceremony as a condition for receiving their diploma, which will be awarded during the ceremony.
3. Graduates who cannot attend the graduation ceremony can collect their diploma from the Faculty or re-register to participate in a future graduation ceremony.
4. If a graduate does not attend the graduation ceremony within one year of their graduation date, the University is not responsible for any loss or damage to the diploma.
5. Diplomas required before the graduation ceremony can be borrowed by submitting a request according to the applicable regulations.
6. Diplomas that have been awarded to alumni cannot be reissued.
7. If a diploma is damaged, lost, or destroyed, as evidenced by a written statement from the police, a Replacement Certificate can be issued according to the provisions of the Regulation of the Minister of Research, Technology, and Higher Education (Permenristekdikti) No. 59 of 2018.

Article 33

Rules and Code of Conduct for Students

Rules and Code of Conduct for Students is pursuant to the Education Guidelines of Universitas Brawijaya the Academic emic ear 2022-2023 Chapter XV.

Article 34

Academic Sanctions

1. Academic sanctions are imposed on students who violate the prevailing student rules and code of conduct. Determination of misconduct is documented in an official report at the time of the incident.
2. Students who attend less than 80% of total face-to-face sessions (14 sessions) are not allowed to take the End-Semester Examination (UAS) due to their own negligence.
3. Students who engage in academic misconduct during exams are subject to the cancellation of the course in which the misconduct occurred.
4. Students who withdraw from a course outside the designated period are given a grade of E for that course.
5. Students who take exams on behalf of others and/or students whose exams are taken by others are subject to the cancellation of all examinations for all courses in the relevant semester.
6. Students who make unauthorized changes to their Study Plan Card (KRS) are subject to the cancellation of their entire study plan for the relevant semester.

7. Students who commit administrative fraud (falsifying formal documents, data, and signatures) are subject to the cancellation of their entire study plan for the relevant semester and other sanctions in accordance with applicable regulations.
8. Students who engage in violent acts, such as fighting and other criminal activities, are subject to the cancellation of their entire study plan for the relevant semester and other sanctions in accordance with applicable regulations.
9. Students who make unauthorized grade changes will be suspended for a minimum of two semesters, which will not be counted as terminated study period.
10. Students who commit plagiarism in their final project/thesis/dissertation will have their end-semester examination grade cancelled.
11. Students who commit the aforementioned violations (points 2 - 10) accompanied by threats of violence, promises, or deceit, will be expelled from the University.

CHAPTER V CURRICULUM, SYLLABI, AND SPECIFIC RULES

Article 35

1. The vision, mission, objectives, curriculum, syllabi, and specific regulations of the Department/Study Program are established by each respective Department/Study Program and are presented in Section B of the Department's Education Guidelines in this Education Guidelines.
2. The Department/Study Program conducts the learning process based on learning outcomes (Outcome Based Education).
3. The Department/Study Program implements the MBKM curriculum, which may adopt the six educational pathways and eight forms of independent learning activities as determined by the University.
4. The equivalence of courses with learning activities outside the Study Program or outside the University is regulated by each respective Department/Study Program.

CHAPTER VI FINAL PROJECT/BACHELOR'S THESIS

Article 36

General Provisions Concerning Final Project/Bachelor's Thesis

1. To undertake the Undergraduate Final Examination, a student is required to complete a final project/thesis, which is a scholarly work in their field of study, written based on research and literature review as stipulated by the Study Program.
2. The requirements for taking the final project/thesis involve the following:
   a. Active enrollment as a student in the relevant academic year and having included the final project/thesis in the study plan.
   b. Completion and passing of all compulsory courses and accumulation of a certain number of credits as determined by the Study Program.
   c. A minimum GPA of 2.00.
   d. Fulfillment of other requirements specified by the Study Program.

3. The procedures and methods for completing the final project/thesis are regulated in the Faculty's Guidelines for Writing Final Projects/Theses, Theses, and Dissertations.

Article 37

Study Load and Time Frame for Final Project/Bachelor's Thesis

1. The final project/thesis carries a study load of 6 (six) credits.
2. The final project/thesis must be completed within 6 (six) months from the issuance date of the Final Project/Thesis Supervisor Assignment Letter.
3. The evaluation of the final project/thesis is conducted within the timeframe specified in paragraph (2) according to the procedures determined by each Study Program.
4. An extension for the completion of the Final Project/Thesis requires the Dean's approval in the form of an extension of the Final Project/Thesis Supervisor Assignment Letter or a replacement of the supervisor upon the Department's request, and must be included in the Study Plan for the subsequent semester according to the procedures established by each Study Program.

Article 38

Qualification and Determination of Rights and Obligations of Lecturers Designated as Supervisors of Final Projects/Theses

1. In preparing the Final Project/Thesis, a student must be supervised by 1 (one) or 2 (two) lecturers, serving as a Main Supervisor and a Co-Supervisor. Other provisions regarding the composition of the Final Project/Thesis supervisors may be determined by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
2. The Main Supervisor and the Co-Supervisor are appointed by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
3. A Main Supervisor must be a lecturer with at least the functional position of an Assistant Professor and hold at least a Master's degree or equivalent, or hold the functional position of an Instructor and have a Doctorate or equivalent. A Co-Supervisor must be a lecturer with at least the functional position of an Instructor and hold at least a Master's degree or equivalent. The determination of qualifications for supervisors outside these requirements will be set by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
4. Adjunct lecturers or guest lecturers can be proposed as Main Supervisors or Co-Supervisors and are appointed by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
5. The duties and responsibilities of the Main Supervisor are: a.
   a. Assisting and directing students in identifying issues to form the basis of the final project/thesis.
   b. Supervising students in the execution of their final project/thesis.
   c. Guiding students in writing their final project/thesis.
   d. Coordinating with the Co-Supervisor in guiding students to complete their final project/thesis.

6. The duties and responsibilities of the Co-Supervisor are to assist the Main Supervisor in guiding students on their final project/thesis.

Article 39

Nature and Objectives of Bachelor's Final Project Examinations

1. A Bachelor's Final Project Examination is the final examination must be undertaken by students as a requirement for obtaining a Bachelor's degree.
2. The Bachelor's Final Project Examination is comprehensive and conducted orally.
3. The purpose of the Bachelor's Final Project Examination is to evaluate students' mastery of knowledge and application of technology in accordance with their field of expertise.
4. The Bachelor's Final Project Examination also aims to address areas of weakness, thereby enhancing students' competencies.
5. Bachelor's Final Project Examinations may include theses, nationally/internationally recognized scientific achievements, reputable publications, or design or development reports.

Article 40

Requirements to Accomplish Bachelor's Final Project Examinations

1. Students are registered in the relevant academic year.
2. Students have complete all coursework except for the Final Project/Thesis.
3. Students have achieved a minimum GPA of 2.00.
4. Students have no final grade of E in any courses taken.
5. Grades of D/D+ must not exceed 10% of the total credits taken by students.
6. Students have completed and passed the Final Project/Thesis Proposal Seminar and/or Final Project/Thesis Results Seminar.
7. Students have fulfilled the academic and administrative requirements specified by each Study Program.
8. The decision to conduct the Bachelor's Final Project Examination is determined by the Dean upon the recommendation of the Head of the Department/Program Coordinator, accompanied by the necessary requirements.

Article 41

Bachelor's Final Project Examinations

1. The time and administration of the Bachelor's Final Project Examination are determined by the Department/Study Program.
2. The Examination Committee for the Bachelor's Final Project Examination is appointed by the Dean upon the recommendation of the Head of the Department/Program Coordinator, consisting of a Chair, a Secretary, and at least three Examiners (including Supervisors and Non-Supervising Lecturers). The Chair and Secretary of the Examination Committee are the

Head and Secretary of the Department/Study Program or other lecturers designated by the Dean upon the recommendation of the Head of the Department/Study Program.

3. The Examination Committee for the Bachelor's Final Project Examination must meet the following qualifications:
   a. The Chair and Secretary must at least hold the rank of Associate Professor or Assistant Professor with a Master's degree, or Instructor with a Doctorate degree. The determination of the Examination Committee outside these qualifications can be made by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
   b. Witness Examiners must at least hold the rank of Assistant Professor with a Master's degree, or Instructor with a Doctorate degree.
   c. Non-Supervising Examiners must hold at least the rank of Instructor with a minimum of a Master's degree.
   d. Examiners may be proposed from other institutions whose field of expertise aligns with the student's final project/thesis and are appointed by the Dean upon the recommendation of the Head of the Department/Program Coordinator.
4. Duties of the Examination Committee:
   a. Chair:

      i. Leading the Examination Committee sessions.

      ii. Being responsible to the Dean for the administration of the Bachelor's Final Project Examination and signing the examination minutes.

   b. Secretary:

      i. Organizing and recording necessary details during the conduct of the Bachelor's Final Project Examination.

      ii. Preparing and signing the examination minutes.

   c. Witness Examiners:
      i. Observing the examination process.
      ii. Providing input during the determination of the examination results.
   d. Examiners:

      i. Posing questions relevant to their field.

      ii. Evaluating the answers to the questions posed.

   e. Supervising Lecturers:
      i. Assisting and/or examining their supervisees during the Bachelor's Final Project Examination process.
5. The duration allocated for the Bachelor's Final Project Examination is a maximum of 120 minutes per student.
6. Students may be accompanied by at least one supervising lecturer during the Bachelor's Final Project Examination process.
7. The elements evaluated in the Bachelor's Final Project Examination include:

a. The quality of the scientific work (final project/thesis), including academic substance and scientific writing conventions.
b. Mastery of the subject matter as demonstrated in answering the Examination Committee's questions. c. Attitude and response during the examination process.

8. The Chair of the Examination Committee leads the deliberation to determine the Bachelor's Final Project Examination grade, represented by A, B+, B, C+, C, D+, D, or E.
9. To pass the Bachelor's Final Project Examination, a student must obtain at least a C grade.
10. Students who do not pass the Bachelor's Final Project Examination must comply with the Examination Committee's decision and must retake the Bachelor's Final Project Examination at a time determined by the Department/Study Program, provided that the student's study period has not exceeded.
11. The Bachelor's Final Project Examination grade also includes the evaluation of the final project/thesis by the Supervising Lecturers and/or the Proposal Seminar grade and/or the Results Seminar grade and/or the Bachelor's Final Project Examination grade, with the weight determined by each Study Program.
12. The *judicium* for the undergraduate degree must be conducted no later than six months from the date of passing the Bachelor's Final Project Examination, as further regulated in the Academic Regulations of the Study Program.

CHAPTER VII THESIS

Article 42

General provisions Concerning Thesis

1. To undertake the Master's Final Examination, a student is required to complete a thesis as a scientific work in their field of study, written based on independent research under the supervision and guidance of thesis supervisors in accordance with the regulations set by the Study Program.
2. The thesis must contribute to the development of knowledge and technology in the relevant field and must align with the scope of the study program in which the student is enrolled. Data or facts used as the basis for the thesis must come from research activities and/or literature studies. The data must be obtained honestly, validly, and free from any elements of plagiarism.
3. The requirements for undertaking a thesis are as follows:
   a. Completion of at least 14 credits with a minimum GPA of 3.00;
   b. Successful completion of the Research Methods course with a minimum grade of B;
   c. Establishment of a thesis supervisory committee;
   d. Fulfillment of all administrative requirements in accordance with applicable regulations.
4. The procedures and methods for writing the thesis are governed by the Faculty's Guidelines for Writing Final Projects/Bachelor's Theses, Master's Theses, and Doctoral Dissertations.

Article 43

Study Load and Study Depth

1. The thesis carries a study load of 9 to 15 credits.
2. The study load of the thesis is determined by the Head of the Department based on the recommendation of the Head of the Study Program, considering the nature of the activities, the depth of the study, and the timeline for its completion.
3. Thesis research is supervised by a Supervisory Committee, which is appointed by a Dean's Decree, taking into account the recommendations from the Head of the Department.
4. The academic activities of the thesis consist of several stages:
   a. Preparation of the Thesis Proposal;
   b. Thesis Proposal Examination/Seminar;
   c. Implementation of Thesis Research;
   d. Writing and Publication of the Thesis in a Scientific Journal or Proceeding;
   e. Preparation of the Thesis Manuscript;
   f. Thesis Results Seminar; and
   g. Master's Final Examination
5. Further provisions regarding the requirements, implementation, procedures, and assessment methods for the stages mentioned in points (4.a) to (4.g) are regulated by the Study Program, with reference to the Universitas Brawijaya Education Guidelines for the Academic Year 2022-2023.

Article 44

Qualification and Determination of Rights and Obligations of Lecturers Designated as Master's Thesis Supervisors

1. The preparation of the thesis is supervised by two or more Thesis Supervisors, who hold doctoral degrees in a relevant field of study or a related sub-discipline within the Study Program where the student is enrolled, and who have at least the academic rank of Assistant Professor. The second supervisor may be from outside the University.
2. Thesis Supervisors are appointed by the Dean based on the recommendation of the Head of the Study Program.
3. Further provisions regarding the qualifications, procedures for appointment, rights, and responsibilities of the Thesis Supervisors are regulated by the Study Program.

Article 45

Thesis Proposal Examination

1. The thesis proposal examination is conducted by the Department to assess the scientific merit of the thesis research proposal submitted by the student. The material for this examination includes the thesis proposal manuscript, which consists of an Introduction, Literature Review, and Research Methods.
2. The requirements for conducting the Thesis Proposal Examination include:
   a. Completing at least 14 credits with a minimum GPA of 3.00.
   b. Passing the Research Methods course with a minimum grade of B.
   c. Having a Thesis Advisory Committee.

d. Fulfilling all administrative requirements as stipulated by the regulations.

e. The proposal examination can be conducted for approximately 90 to 120 minutes and must be attended by at least 3 out of 4 members of the examination committee. If the main supervisor is unable to attend the seminar/proposal examination, the co-supervisor must represent them. The Thesis Proposal Examination cannot be conducted outside of an official forum.

f. The assessment of the Thesis Proposal Examination is carried out by all attending members of the examination committee. The final grade for the Thesis Proposal Examination is the average of the grades given by all examiners. A student is considered to have passed the Thesis Proposal Examination if the average grade obtained is at least a B. If the student does not achieve the minimum passing grade, a repeat examination will be conducted. The technical provisions and procedures for the repeat Thesis Proposal Examination are regulated by the Study Program.

Article 46

Thesis Results Seminar

1. The Thesis Results Seminar must be conducted by Master's program students who have completed their research, have a thesis manuscript approved by the Supervisory Committee, possess at least a draft of a scientific publication, and have met all administrative requirements as stipulated by the applicable regulations.
2. Requirements for conducting the Thesis Results Seminar include:
   a. Completion of the Thesis Proposal Examination.
   b. Completion of the research and possession of a thesis draft approved and signed by the supervisory committee.
   c. Submission of a draft journal article to the supervisory committee. The student has participated in or attended a minimum number of Thesis Results Seminars as specified by their respective Study Program.
   d. Fulfillment of all administrative requirements as stipulated by the applicable regulations.
3. The Thesis Results Seminar is attended by the Supervisory Committee, Master's program students, and other interested parties (those intending to attend the Thesis Results Seminar, or special invitees invited by the presenter to provide suggestions for improving the thesis manuscript).
4. The Thesis Results Seminar is conducted for approximately 90 to 120 minutes and can only be held if at least one advisor is present. The Thesis Results Seminar cannot be conducted outside of an official forum.
5. A student can be declared to have passed the Thesis Results Seminar if the average grade obtained is at least a B. If the student does not achieve the minimum passing grade for the Thesis Results Seminar, a repeat examination will be conducted. The technical provisions and procedures for retaking Thesis Results Seminar are regulated by the Study Program.

Article 47

Master’s Final Examination

1. The Master's Thesis Defense can be conducted if the student has completed the Thesis Results Seminar, the thesis manuscript has been approved by the Supervisory Committee, and all administrative requirements have been fulfilled as stipulated by the applicable regulations.
2. The thesis manuscript submitted for the Master's Thesis Defense must meet the following criteria:
   a. The thesis is declared free from plagiarism with a maximum similarity index (from the Introduction to the Conclusion and Recommendations chapters) of 20% by the Department's plagiarism detection team.
   b. A minimum of one scientific article has been published in a Scopus-indexed proceeding, or an international journal indexed by Scopus or the Web of Science Core Collection, or published research in a nationally accredited Sinta 2 journal, or UB journal designated by the Rector based on Rector's Regulation Number 52 of 2018.
3. Registration for the Master's Thesis Defense must be completed at least 7 days before the scheduled examination date.
4. The Master's Thesis Defense is conducted based on the recommendation of the Chair of the Supervisory Committee to the Head of the Study Program, with a copy submitted to the Head of the Department. Based on this recommendation, the Head of the Study Program appoints two additional examiners outside the Supervisory Committee. The Head of the Study Program then processes the examination arrangements and invites the Examination Team, including the schedule, venue, and thesis manuscript.
5. The Master's Thesis Defense forum is chaired by the Chair of the Supervisory Committee. If the Chair is unable to attend, the Chair can assign a Committee Member to lead the examination. The examination can be conducted if at least 3 out of 4 members of the examination team are present.
6. The Master's Thesis Defense lasts for approximately 90 minutes, focusing on the thesis manuscript. The examination cannot be conducted outside the official examination forum.
7. The assessment of the Master's Thesis Defense includes the student's mastery of the thesis material, comprehensive ability in presenting and defending the thesis content, and other components determined by the Study Program. The assessment is provided by all advisors and examiners according to the Master's Thesis Final Examination assessment format.
8. The six components of the thesis assessment with their respective weightings are as follows:

Thesis Assessment Component	Weight
a. Research proposal	15%
b. Research conducted	20%
c. Thesis writing	15%
d. Journal article writing	20%
e. Research results seminar	10%
f.Master's final examination	20%

9. The minimum passing grade for the Master's Thesis Defense is a B. If the student receives a grade below this, they must retake the Master's Thesis Defense and are allowed one opportunity for a retake. If the student does not pass the first retake, they will be given a special assignment (with the approval of the Supervisory Committee) and will proceed to a second retake of the thesis examination (within a maximum of one semester). If the student does not pass the second retake, they will be declared to have failed the program (Drop Out).
10. Revisions to the thesis (based on suggestions and revisions from the Examination Committee) must be completed within a maximum of 2 (two) months after the thesis defense. If the student does not complete the revisions and submit the thesis to the academic section of the Master's Program within the maximum period (2 months), they must retake the Master's Final Examination, taking into account the maximum study duration for the Master's Program (for students nearing the maximum study period required by the Master's Program).
11. Students who have passed the Master's Final Examination and completed the revisions with the approval of the Supervisory Committee may duplicate the thesis (for the Supervisory Committee, Department, University Library, and other necessary parties). The thesis is then validated by the signatures of the Supervisory Committee and the Head of the Study Program.
12. In special cases, Master's program students with outstanding achievements in international publications, as determined by the Rector, may be recommended by the Examination Committee to the Dean to be awarded a grade of A for the thesis without the Master's Thesis Defense. Outstanding achievements are proven by:
    a. Having scientific publications:
        - at least 2 (two) scientific articles published or accepted for publication in a journal accredited at least Sinta 2; or
        - at least 1 (one) article published or accepted for publication in a Scopus-indexed proceeding; or
        - at least 1 (one) article published or accepted for publication in an international journal indexed by Scopus or the Web of Science Core Collection (Thomson Reuters).
    b. Having an average grade of A in all thesis examination/seminar stages.
    c. The thesis having been evaluated by the Examination Committee, and corrections based on the committee's suggestions having been reviewed and approved by the Supervisory Committee. Even for students with outstanding achievements, the thesis must still be written and submitted to the Academic Section of the Master's Program.

Article 48

Scientific Research Publication

1. The research publication is a part of the graduation requirements for master's degree students, as referred to in Rector's Regulation of Universitas Brawijaya No. 52 of 2018 concerning the Publication of Scientific Work as Part of the Final Assignment for Master's and Doctoral Programs.
2. The scientific publications set forth in Rector's Regulation No. 52 of 2018 can be produced in the form of:

a. Publications in International Scientific Journals indexed by Scopus or the Web of Science Core Collection (Thomson Reuters), or
b. Publications in International Scientific Seminars that publish Scopus-indexed proceedings, or
c. Accredited National Scientific Journals (SINTA) by the Ministry of Education, Culture, Research, and Technology (Kemdikbudristek), or
d. UB Journals as determined by the Rector.

e. The publication of scientific work is a collaborative written work between the student and the academic supervisor, thereby making both the content and quality of the scientific publication a shared responsibility.
f. The scientific publication may comprise a part or the entirety of the student's thesis material, provided it is deemed publishable by the Thesis Supervisory Committee.
g. Students are required to consult with their supervisors regarding the format and substance of the draft journal article to ensure the quality of the draft article to be submitted. The draft journal article must be approved by the Thesis Supervisory Committee before being submitted to the intended journal's editorial board.
h. The submission period for the journal manuscript to the respective journal publisher does not necessarily have to be after the student has completed the Final Master's defense, but can be done during the thesis preparation period, in accordance with consultations with the supervisor.
i. In writing journal articles for scientific publications, students are required to list Universitas Brawijaya as their primary affiliation. If students need to include their original institution as an affiliation, it may be listed as a secondary affiliation following Universitas Brawijaya.

Consider equivalency of numerical grades, graduate titles, study duration, and graduation assessment, including academic failure (referencing the UB Academic Guidelines: http://bak.ub.ac.id/wp-content/uploads/2015/03/Buku-Pedoman-Pendidikan-UB-2020-2021.pdf)

CHAPTER VIII DISSERTATION

Article 49

General Provisions Concerning Dissertation

1. To undertake the Doctoral Final Examination, a student is required to prepare a dissertation, an academic work resulting from thorough and independent research. The dissertation must contain new contributions to the advancement of science and technology and is conducted under the supervision of supervisors, as regulated by the Study Program.
2. Fundamentally, the dissertation can be evaluated based on:
   a. The originality and scientific value of the contributions to the field of study relevant to the dissertation topic and/or in the application of its theories.
   b. The currency of the theory and methodology used, the appropriateness of the research approach, and the depth of reasoning and analysis.

c. The systematic organization of thoughts, the accuracy in formulating problems, the discussion of research results, and the conclusions.

3. The requirements for undertaking a dissertation are:
   a. Having passed a minimum of 12 credits with a minimum GPA of 3.00;
   b. Having passed the qualifying examination; and
   c. Having fulfilled all administrative requirements in accordance with the prevailing regulations.
4. The procedures and methods for preparing the dissertation are governed by the Faculty's Composition Guidelines for Final Assignments/Bachelor's and Master's Theses and Dissertations.

Article 50

Dissertation Load and Depth

1. The dissertation carries a minimum study load of 28 (twenty-eight) credits.
2. The dissertation load is determined by the Department Head upon the recommendation of the Head of the Study Program based on the nature of the activities, the depth of the study, and the time devoted to its completion
3. Dissertation research is supervised by a Supervisory Committee, as regulated in the Dean's Decree.
4. The academic activities of the dissertation consist of the following stages:
   a. Preparation of the dissertation proposal;
   b. Supervisory Committee session to discuss the dissertation proposal;
   c. Dissertation proposal examination;
   d. Implementation of dissertation research;
   e. Dissertation composition and publication through journals and proceeding
   f. Preparation of the dissertation manuscript;
   g. Supervisory Committee session to discuss the dissertation manuscript;
   h. Dissertation results seminar;
   i. Supervisory Committee session for the preparation of the Dissertation Feasibility Examination;
   j. Closed Dissertation Examination;
   k. Supervisory Committee meeting for the preparation of the Open Dissertation Examination;
   l. Open Dissertation Examination.
5. Further provisions regarding the requirements, implementation, procedures, and evaluation methods for the various dissertation stages are regulated by the Study Program with reference to the Educational Guidelines of Universitas Brawijaya for the Academic Year 2022-2023.

Article 51

Qualification and Determination of Rights and Obligations of Lecturers Designated as Dissertation Supervisors

1. The dissertation is independently prepared by the student under the guidance of a Supervisory Committee, chaired by a Promoter, and assisted by two (2) or more Co-promoters from various fields of expertise necessary to achieve the learning outcomes of the Doctoral education program.
2. The Promoter must hold a functional position as a Professor or at least an Associate Professor and possess a Doctorate in a field of study or a sub-discipline relevant to the Study Program in which the student is enrolled.
3. The Promoter must have produced at least two (2) scientific articles published in indexed/reputable international journals with an impact factor of at least 0.1 or equivalent, either as the first author or corresponding author.
4. Co-promoters from within the University must hold a functional position of at least an Assistant Professor and possess a Doctorate in a field of study or a sub-discipline relevant to the Study Program in which the student is enrolled.
5. Co-promoters from outside the University must hold a functional position as a Professor or at least an Associate Professor and possess a Doctorate in a field of study or a sub-discipline relevant to the Study Program in which the student is enrolled.
6. Co-promoters from outside the University must have produced at least two (2) scientific articles published in indexed/reputable international journals with an SJR of at least 0.1, either as the first author or corresponding author.
7. The Supervisory Committee is appointed by the Dean upon the recommendation of the Head of the Study Program.
8. Further provisions regarding the qualifications, appointment procedures, rights, and obligations of the Supervisory Committee are regulated by the Study Program.

Article 52

Dissertation Proposal Examination

1. The Dissertation Proposal Examination is conducted by the Department to evaluate the scientific merit of the dissertation research proposal submitted by the student, which has been approved by the Supervisory Committee.
2. The Dissertation Proposal Examination must be conducted no later than the 8th semester.
3. The Dissertation Proposal Examination is arranged based on the Promoter's recommendation to the Head of the Study Program and a copy is made to be submitted to the Head of the Department. Based on this recommendation, the Head of the Study Program appoints two (2) additional examiners outside of the Supervisory Committee. The Head of the Study Program then organizes the examination, including scheduling, venue, and the dissertation proposal document.
4. The Dissertation Proposal Examination is chaired by the Promoter. If the Promoter is unable to attend, the Promoter may delegate one of the Co-promoters to chair the examination. The examination can be conducted if attended by at least two (2) members of the Supervisory Committee and two (2) additional examiners.

5. The Dissertation Proposal Examination lasts 90–120 minutes and involves the presentation of the dissertation proposal document. The examination cannot be conducted outside the official examination forum.
6. The evaluation of the Dissertation Proposal Examination includes the research background, research problem, concepts to address the research problem, research methodology, literature analysis, and the student's comprehensive ability to present and defend the research proposal. The evaluation is recorded on an assessment form with weights as stipulated by the Study Program.
7. The passing grade for the Dissertation Proposal Examination is a minimum of B. If the grade is below this threshold, the student must retake the Dissertation Proposal Examination within a maximum of 2 months after the first examination. If the student fails again, the Supervisory Committee assigns special tasks to improve the research proposal and the student's academic abilities. The student is then given the opportunity to retake the Dissertation Proposal Examination in the following semester.
8. Students who pass the Dissertation Proposal Examination are required to promptly revise their research proposal according to the suggestions from the Examination Committee while consulting with the Supervisory Committee. The revised dissertation proposal, once approved by the Supervisory Committee, is validated by the Head of the Study Program as the official dissertation proposal. The student can then proceed with the research and subsequent activities towards the completion of their dissertation.

Article 53

Conducting Research for Dissertation

1. The implementation of research constitutes the execution of the activities planned in the dissertation proposal, which has been approved in the Dissertation Proposal Examination and validated by the Dean.
2. Research may be conducted in regions/areas selected according to the research objectives and approved by the Supervisory Committee. The research implementation must be supervised by the Chair of the Supervisory Committee or their representative, following the procedures stipulated in the Dean's Decree on Research Supervision by the Supervisory Committee.
3. Students are required to use and fill out the Research Control Card (KKP) and/or the Dissertation Research Logbook, as well as the Dissertation Research Progress Report (LKP), to document their research process/activities, monitor research progress, and serve as a communication tool with the Supervisory Committee. The minimum content requirements for the KKP and LKP are outlined in the Universitas Brawijaya Educational Guidelines for the Academic Year 2022-2023.
4. Students who have completed their research are subsequently required to prepare the dissertation manuscript and a draft of the scientific publication in accordance with Rector

Regulation Number 52 of 2018. Both documents must then be reviewed in a Supervisory Committee Meeting before the Dissertation Results Seminar is conducted.

Article 54

Dissertation Results Seminar

1. The Dissertation Results Seminar is a mandatory academic activity for Doctoral program students who have completed their research, have a dissertation manuscript approved by the Supervisory Committee, and have at least a draft of a scientific publication, as well as have fulfilled all administrative requirements according to the applicable regulations.
2. The Dissertation Results Seminar is conducted based on a proposal by the Promoter to the Head of the Study Program, with a copy submitted to the Head of the Department. Based on this proposal, the Head of the Study Program appoints three additional examiners from outside the Supervisory Committee. The Head of the Study Program then processes the seminar organization and invites the Examination Committee, including the schedule, venue for the seminar, the dissertation manuscript, and the draft scientific publication.
3. The Dissertation Results Seminar is chaired by the Promoter; if the Promoter is unable to attend for any reason, the Promoter may assign one of the Co-promoters to chair the seminar. The seminar can be conducted if attended by at least two members of the Supervisory Committee and two examiners.
4. The Dissertation Results Seminar is held for 90-120 minutes, focusing on the dissertation manuscript and the draft scientific publication. The seminar cannot be conducted outside the official seminar forum.
5. The assessment components include the dissertation manuscript, the draft scientific publication, the presentation during the seminar, and the discussion throughout the seminar. The assessment is recorded on an evaluation form with weightings as determined by the Study Program.
6. The passing grade for the Dissertation Results Seminar is a minimum of B. If the grade is below this, the student must repeat the Dissertation Results Seminar within a maximum of two months after the first seminar. If the student fails again in this repeat seminar, the Supervisory Committee will assign special tasks to improve the research proposal and the student's academic abilities. The student will still have the opportunity to conduct the Dissertation Results Seminar in the following semester.
7. Students who have passed the Dissertation Results Seminar must immediately revise their research according to the suggestions from the Examination Committee while consulting with the Supervisory Committee. The dissertation manuscript approved by the Supervisory Committee is validated by the Head of the Study Program as the final dissertation manuscript. Subsequently, the student can proceed with the next steps towards completing their dissertation.

Article 55

Closed Dissertation Defense

1. The Closed Dissertation Defense is a mandatory examination for Doctoral program students who have completed their research, revised their dissertation manuscript based on the suggestions from the Dissertation Results Seminar Examination Committee, and obtained approval from the Supervisory Committee. Additionally, the students must have at least two scientific publications from their dissertation research that have been published or accepted for publication in accordance with Rector's Regulation No. 52 of 2018.
2. The Closed Dissertation Defense is conducted based on a proposal by the Promoter to the Head of the Study Program, with a copy to the Head of the Department. The Dean, based on the proposal from the Head of the Department, appoints the Closed Dissertation defense Committee, which consists of the Supervisory Committee, two examiners, and one reviewer. The Head of the Study Program coordinates the examination arrangements and invites the Closed Dissertation Examination Committee according to the established schedule and venue.
3. The Closed Dissertation Defense can be held if attended by at least the Promoter, one Co-promoter, two examiners, and one reviewer.
4. The Closed Dissertation Defense lasts 90-120 minutes and focuses on the dissertation manuscript. The examination cannot be conducted outside the official examination forum.
5. The assessment components of the Closed Dissertation Defense include:
    a. The contribution of the research results to the advancement of science and technology and development,
    b. Mastery of research methods,
    c. Mastery of the subject matter,
    d. The candidate's ability to present scientific arguments,
    e. The quality of the dissertation manuscript as an academic scientific doctoral work.
6. The Final Grade of the Closed Dissertation Defense is determined through deliberation based on the assessments provided by all members of the Closed Dissertation Defense Committee. The results are then announced directly to the student after the deliberation. The Final Grade of the Closed Dissertation Defense includes various assessment components from previous activities:
    a. The assessment results of the Dissertation Proposal,
    b. The assessment of the dissertation research implementation,
    c. Journal articles and the dissertation results seminar,
    d. The assessment results of the Closed Dissertation Defense.
7. The passing grade for the Closed Dissertation Examination is a minimum of B. If the grade is below this, the student must retake the Closed Dissertation Defense within a maximum of two months after the first examination. If the student fails again in the retake, the Supervisory Committee assigns special tasks to improve the dissertation manuscript and the student's academic abilities before proposing another retake. If the student fails again in the second retake, they are deemed unfit to complete the Doctoral program and are declared to have dropped out.
8. Students who have passed the Closed Dissertation Examination must immediately revise their dissertation manuscript according to the suggestions from the Closed Dissertation Examination Committee. The revised manuscript, approved by all examiners and the Supervisory Committee, is then duplicated as needed. After manuscript validation by the Head

of the Study Program/Department, the student is eligible to propose taking the Open Dissertation Defense.

9. The Promoter may propose to the Dean that the student be awarded an A grade for the dissertation without a Closed Dissertation Defense if the following conditions are met:
   a. At least two scientific articles have been published or accepted for publication in international scientific journals indexed by Scopus or Web of Science Core Collection (Thomson Reuters) with a minimum quality of Q3, and/or with a minimum impact factor of 0.1;
   b. An average grade of A in all stages of the dissertation examinations/seminars; and
   c. The dissertation manuscript has been evaluated and approved by the Supervisory Committee and disseminated in an academic forum at the Faculty.

Article 56

Open Dissertation Defense

1. The Open Dissertation Defense is a mandatory examination for Doctoral program students who have completed their research, passed the Closed Dissertation Defense, been declared free of plagiarism for their dissertation manuscript, and fulfilled all applicable administrative requirements. The Open Dissertation Examination is organized by the Department to comprehensively and publicly assess the candidate's abilities in the presence of academic peers and other invited parties.
2. The Open Dissertation Defense is conducted no sooner than one month and no later than six months after the Closed Dissertation Defense.
3. The purpose of the Open Dissertation Defense is to provide an overview of the Doctoral program's quality at the Faculty in terms of academic quality, graduate quality, assessment objectivity, and the contribution of dissertation research to the advancement of science and technology, societal development, the nation, and the Republic of Indonesia, as well as humanity universally.
4. The Open Dissertation Defense is conducted based on a proposal by the Promoter to the Head of the Study Program, with a copy addressed to the Head of the Department. The Dean, based on the proposal from the Head of the Department, appoints the Open Dissertation Defense Committee, which consists of the Chairperson (Dean or appointed faculty member); Promoter (one person); Co-promoters (two persons); Examiners (two to three persons); and an External Examiner (one person), who is an expert from outside the University with expertise relevant to the dissertation content. The External Examiner is proposed by the Promoter to the Head of the Study Program and appointed by the Dean's Decree.
5. The Open Dissertation Defense can be held if attended by at least the Promoter, one Co-promoter, two Examiners, and one External Examiner.
6. The Open Dissertation Defense lasts 120-150 minutes, focusing on the dissertation manuscript. The defense cannot be conducted outside the official examination forum.
7. The assessment components of the Open Dissertation Defense emphasize evaluating the candidate's performance as a Doctor, including:
   a. The candidate's ability to present their research findings,

b. The ability to communicate scientific arguments in defending the dissertation,
c. Mastery of research methods,
d. Mastery of related subject matter,
e. Novelty of the research,
f. Contribution of the research findings to the advancement of science and technology and development.

8. The Final Grade of the Open Dissertation Defense is determined through deliberation based on the assessments provided by all members of the Open Dissertation Defense Committee. The results are then announced directly to the candidate after the deliberation.
9. The passing grade for the Open Dissertation Defense is a minimum of B. If the grade is below this, the candidate must retake the Closed Dissertation Defense within a maximum of two months after the first examination. If the candidate fails again in the retake, the Supervisory Committee assigns special tasks to improve the dissertation manuscript and the candidate's academic abilities before proposing another retake. If the candidate fails again in the second retake, they are deemed unfit to complete the Doctoral program and are declared to have dropped out.
10. Students who have passed the Open Dissertation Defense must immediately revise their dissertation manuscript according to the suggestions from the Open Dissertation Examination Committee. The revised manuscript, approved by all examiners and the Supervisory Committee, is then duplicated as needed. After being validated by the Head of the Study Program/Department, the student is eligible to propose graduation.

CHAPTER IX CLOSING

Article 57

1. The regulations set forth in this Education Guidelines are binding and must be adhered to by the academic community within the Faculty.
2. Any other regulations and provisions not included herein shall be further stipulated by the Faculty, provided they do not conflict with these Regulations.

THE DEPARTMENT OF
URBAN AND REGIONAL PLANNING

PREFACE

We offer our utmost praise and gratitude to God Almighty for the completion of the Education Guidelines for the Department of Urban and Regional Planning (PWK) for the Academic Year 2022-2023. This Education Guidelines has been compiled to provide academic information related to the rules and procedures for all educational activities within the Department of Urban and Regional planning, encompassing both the Bachelor's (S1) and Master's (S2) programs.

This Education Guidelines contains information on the Vision, Mission, and Objectives of the Department of Urban and Regional Planning (PWK), the Organizational Structure of the Department, as well as the Curriculum for both the S1 and S2 programs. More specifically, the Education Guidelines also includes several academic regulations covering academic degrees and graduate profiles, learning outcomes, curriculum structure, the learning and assessment process, course syllabi, and the latest departmental academic regulations related to Community Service (KKN-P), Field Work Courses (KKL), Theses, and the Awarding of Outstanding Students of *Merdeka Belajar – Kampus Merdeka* (MBKM), and Outcome-Based Education (OBE).

It is our hope that this Education Guidelines will serve as a reference for Department and Program Administrators, Lecturers, Academic Advisors, and Students, ensuring that educational activities can be conducted smoothly, orderly, and efficiently.

Finally, we hope this Education Guidelines will provide significant and optimal benefits to all parties within the Department at the Faculty of Engineering, Universitas Brawijaya. We extend our gratitude to all those who have contributed to the preparation of this handbook.

Malang, November 2022

The Head of Department of Urban and Regional Planning

Dr. Eng I Nyoman Suluh W., S.T., M.Eng
NIP. 19760122 200312 1 003

VISION, MISSION, AND OBJECTIVES OF THE DEPARTMENT OF URBAN AND REGIONAL PLANNING

As stated in the Strategic Plan (Renstra) of the Department of Urban and regional planning for 2021 - 2024, the Vision, Mission, and Objectives of the Department of Urban and regional planning can be outlined as follows.

Vision

Serving as a leading institution in the development of innovations in the field of Urban and regional planning, with high productivity and competitiveness in Asia through education, research, and community service, capable of actively contributing to sustainable development efforts.

Mission

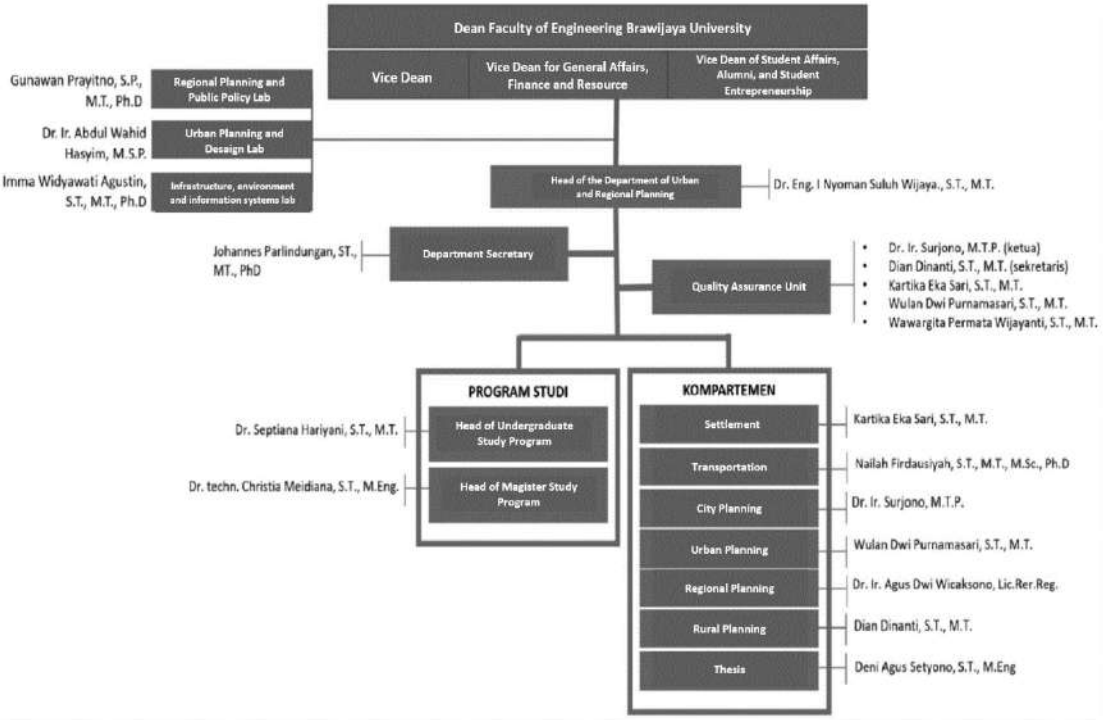
- Enhancing the quality of Urban and regional planning education with international competitiveness to produce graduates of noble character, excellence, and entrepreneurial spirit.
- Conducting innovative and collaborative research and community service to support sustainable and integrated urban-rural development for the welfare of society based on local wisdom.
- Improving the quality of students and graduates with international competitiveness by focusing on sustainable urban-rural integration development.

Objectives

- Achieving excellent accreditation standards for the Urban and regional planning Department.
- Increasing the performance of research and community service to support the excellent reputation of faculty members and the Urban and regional planning Department.
- Enhancing the competitiveness of students and graduates at the national and international levels.

ORGANIZATIONAL STRUCTURE

URBAN AND REGIONAL PLANNING DEPARTMENT



LECTURERS AND ACADEMIC STAFF
URBAN AND REGIONAL PLANNING DEPARTMENT

LECTURERS

NO	NAME	Employee ID#	CLASS	OFFICIAL POSITION
1	Prof. Dr. Ir. Budi Sugiarto Waluyo, M.S.P.	195605021984031001	IV/b	Professor
2	Dr. Ir. Surjono, M.T.P.	196505181990021001	IV/b	Associate Professor
3	Dr.tech. Christia Meidiana, S.T., M.Eng.	197205011999032002	IV/a	Associate Professor
4	Dr. Eng. Fadly Usman, S.T., M.T.	197605142002121002	IV/a	Associate Professor
5	Gunawan Prayitno, S.P., M.T., Ph.D	197710102006041003	III/d	Associate Professor
6	Dr. Ir. A. Wahid Hasyim, M.T.	196512181994121001	IV/a	Associate Professor
7	Dr. Septiana Hariyani, S.T., M.T.	196909281999032001	III/d	Associate Professor

8	Ir. Ismu Rini Dwi Ari, M.T., Ph.D	196812211999032001	III/d	Associate Professor
9	Dr. Ir. Agus Dwi Wicaksono, Lic.rer.reg.	196008121987011001	III/d	Assistant Professor
10	Eddi Basuki Kurniawan, S.T., M.T.	197409242003121003	III/d	Assistant Professor
11	Dr. Wara Indira Rukmi, S.T., M.T.	197106022001122001	III/c	Assistant Professor
12	Dr.Eng. Turniningtyas Ayu R., S.T., M.T.	197303142002122001	III/c	Assistant Professor
13	Imma Widyawati Agustin, S.T., M.T., Ph.D	197508032006042001	III/d	Assistant Professor
14	Dr.Eng. I Nyoman Suluh Wijaya, S.T., M.T.	197601222003121003	III/c	Assistant Professor
15	Nindya Sari, S.T., M.T.	197405302006042001	III/d	Assistant Professor
16	Adipandang Yudono. S.Si., M.U.R.P., Ph.D	197905272008121002	III/c	Assistant Professor
17	Aris Subagiyo, S.T., M.T.	198104042012121005	III/b	Assistant Professor
18	Wisnu Sasongko, S.T., M.T.	197204132002121002	III/b	Instructor
19	Fauzul Rizal Sutikno, S.T., M.T., Ph.D	198110172008011008	III/b	Instructor
20	Mustika Anggraeni, S.T., M.Si	197910262008122002	III/b	Instructor
21	Dimas Wisnu Adrianto, S.T., M.T. , Ph.D	198102012008121002	III/b	Instructor
22	Wawargita Permata Wijayanti, S.T., M.T.	198912122019032017	III/b	Instructor
23	Nailah Firdausiyah, S.T., M.T., M.Sc., Ph.D	198509112020122006	III/c	Assistant Professor
24	Johannes Parlindungan, S.T., M.T.,Ph.D	2011068104161001	III/c	Assistant Professor
25	Chairul Maulidi, S.T., M.T.	2012018412011001	III/c	Assistant Professor
26	Wulan Dwi Purnamasari, S.T., M.T.	2013098806072001	III/c	Assistant Professor
27	AR Rohman Taufiq Hidayat, S.T., M.AgrSc	2014058801261001	III/c	Assistant Professor
28	Deni Agus Setyono, S.T., M.Eng.	2014058608281001	III/c	Assistant Professor
29	Dadang Meru Utomo, ST., MURP.	2014058211101001	III/b	Instructor

30	Dian Dinanti, S.T., M.T.	2010028004102001	III/b	Assistant Professor
31	Kartika Eka Sari, S.T., MT.	2012018402192001	III/b	Instructor

ACADEMIC STAFF

NO	NAME	Employee ID#	CLASS	OFFICIAL POSITION
1	Ema Diana, S.E	197507032001122001	III/a	Academic Data Analyst
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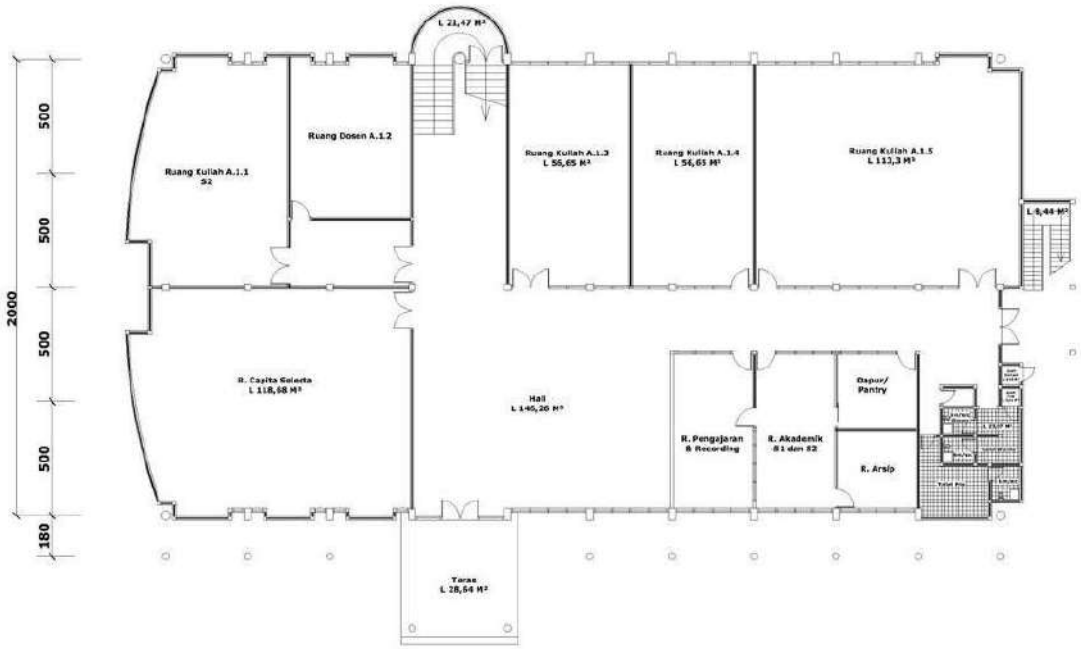
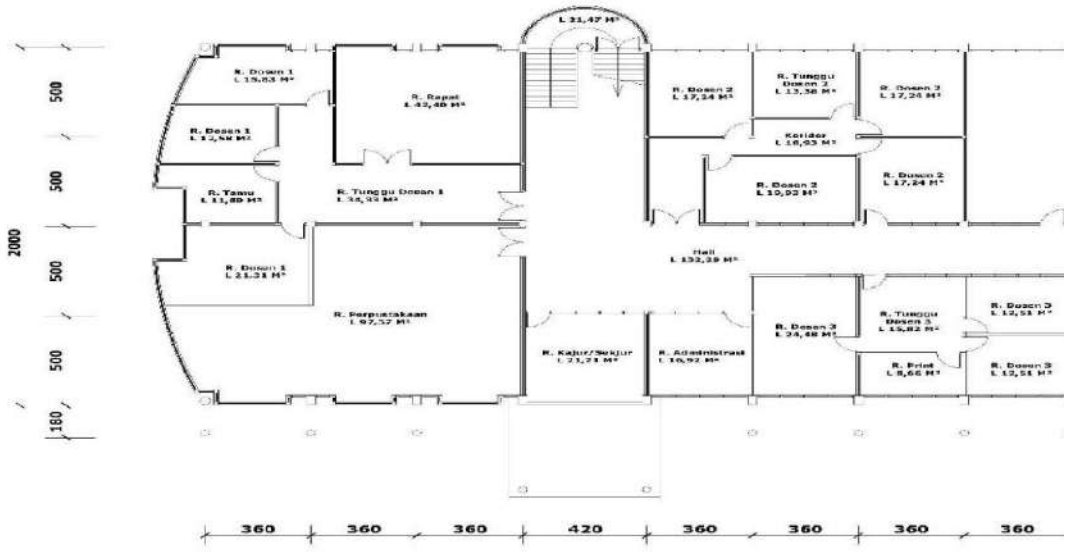
3	Indra Fitrianto	197210312009101001	II/c	Education Facility and Infrastructure Assistant
4	Suwandi	196408112007011002	II/b	Education Facility and Infrastructure Assistant
5	Eka Trisye M, S.E	2010087704262001	III/b	Library Administrator

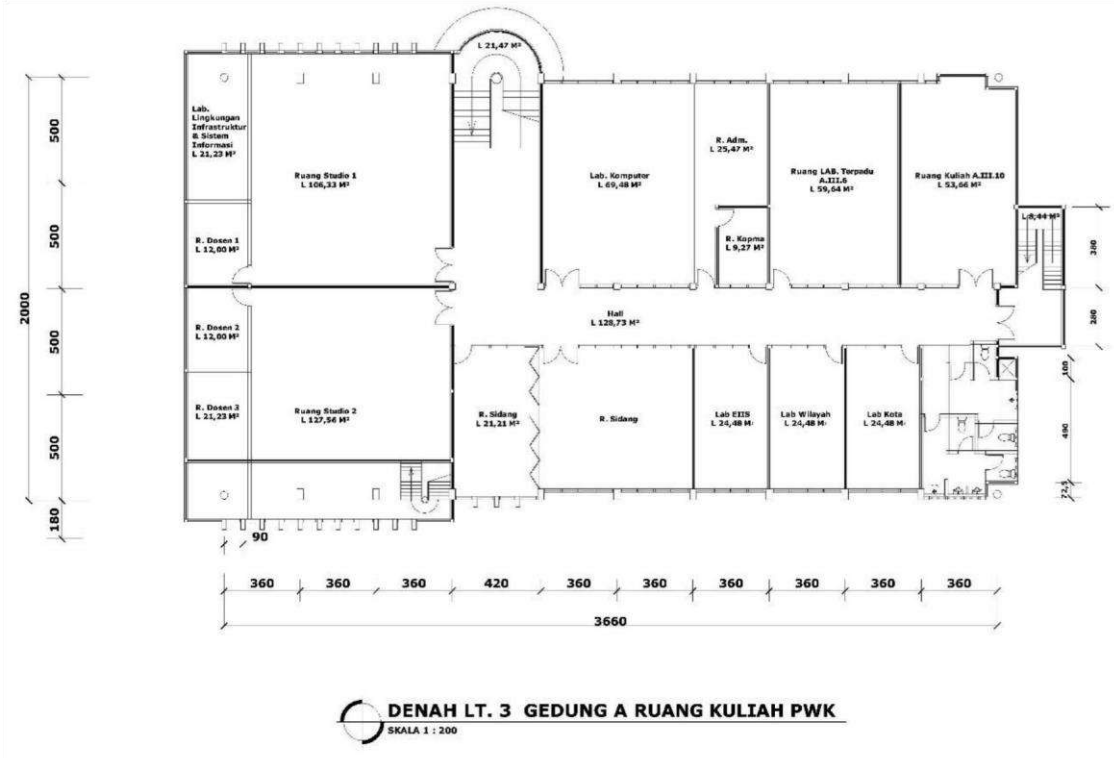
FACILITIES AT THE DEPARTMENT OF URBAN AND REGIONAL PLANNING



DENAH LT. 1 GEDUNG A. RUANG KULIAH PWK
SKALA 1 : 200



DENAH LT. 2 GEDUNG A RUANG KULIAH PWK
SKALA 1 : 200



DENAH LT. 3 GEDUNG A RUANG KULIAH PWK
SKALA 1 : 200

BACHELOR'S PROGRAM (S-1)

URBAN AND REGIONAL PLANNING

EDUCATION GUIDELINES
BACHELOR'S PROGRAM (S-1) OF THE DEPARTMENT OF URBAN AND REGIONAL PLANNING
ACADEMIC YEAR 2022-2023

1. VISION, MISSION, AND OBJECTIVES OF BACHELOR'S STUDY PROGRAM (S-1) OF URBAN AND REGIONAL PLANNING

1.1 VISION OF BACHELOR'S STUDY PROGRAM (S-1) OF URBAN AND REGIONAL PLANNING

To become an institution of Bachelor's Education in Urban and regional planning capable of producing graduates with international (global) competitiveness and able to apply innovative principles and methods of urban and regional planning to support the sustainable integration of urban and rural development

1.2 Mission of Bachelor's Study Program (S-1) of Urban and regional planning

1. Enhancing international competitiveness through curriculum development and *Tri Dharma* collaboration.
2. Improving the quality of the graduates of Bachelor's Program (S-1) of Urban and regional planning as planning experts proficient in applying advanced planning principles and analytical methods through collaborative learning methods.
3. Developing expertise in planning practice through leading research and community service to address issues in the integration of urban and rural areas

1.3 Objectives of Bachelor's Study Program (S-1) of Urban and regional planning

1. Achieving excellence in the S1 Program education with international standards.
2. Producing graduates proficient in applying advanced planning principles and analytical methods through collaborative learning methods, and instilling an entrepreneurial spirit.
3. Ensuring that the work of faculty members is utilized by the community or receiving international recognition through leading research and community service in addressing issues related to the integration of urban and rural areas.

2. PROFILE OF GRADUATES

2.1 Academic Degree

Graduates of the Bachelor's Program in Urban and regional planning (PWK) at the Faculty of Engineering, Universitas Brawijaya, is conferred with the degree of Bachelor of Urban and regional planning (S.P.W.K). This degree is awarded upon the completion of a minimum of 144 credit hours after the final academic assessment (*judisium*). Should there be any changes to the nomenclature of the degree in the future, the management of the Bachelor's Program will adjust accordingly to comply with the prevailing academic regulations.

2.2 Profile of Graduates

The graduates of the Bachelor's Program (S-1) in Urban and regional planning are expected to:

1. Master theoretical concepts and methods in the following fields of Urban and regional planning:
   a. Research knowledge – evaluation planning and research methodology;
   b. General planning applications – housing, rural planning, urban planning, regional planning, transportation planning, or urban design;
   c. Specialized planning applications – infrastructure, environment, information systems, urban management, public policy, and disaster mitigation.
2. Be able to formulate concepts and develop physical spatial planning considering social, cultural, economic, institutional, and environmental aspects.
3. Be able to demonstrate independent, high-quality, and measurable performance.
4. Be able to assess the implications of the development or implementation of science and technology, considering and applying humanitarian values in accordance with their expertise based on scientific principles, procedures, and ethics, in order to produce solutions, ideas, designs, or art critiques.
5. Be able to compose a scientific description of the studies mentioned above in the form of a thesis or final project report and upload it on the university's website.
6. Be able to document, store, secure, and retrieve data to ensure validity and prevent plagiarism.

3. LEARNING OUTCOMES

Expected Graduate Profile from the Bachelor of Urban and Regional Planning Program:

Attitudinal Competencies:

1. Demonstrating piety to God Almighty and exhibiting religious behavior.
2. Upholding human values in performing duties based on religious, moral, and ethical principles.
3. Contributing to improving the quality of community life, nation-building, and advancing civilization based on Pancasila.
4. Acting as a proud and patriotic citizen with a sense of nationalism and responsibility to the nation and state.
5. Respecting cultural diversity, viewpoints, religions, beliefs, and original findings of others.
6. Collaborating effectively and showing social sensitivity and concern for the community and the environment.
7. Adhering to laws and disciplines in community and state life.
8. Integrating academic values, norms, and ethics.
9. Exhibiting responsibility for work in their field of expertise independently.
10. Internalizing a spirit of independence, perseverance, and entrepreneurship.

Knowledge Competencies:

1. Being capable of explaining theoretical concepts and applying research methods in urban and regional planning:
    a. Research knowledge – planning evaluation and research methodology;
    b. General planning applications – settlements, village planning, urban planning, regional planning, transportation planning, or urban design;
    c. Special planning applications – infrastructure, environment, information systems, urban management, public policy, and disaster mitigation.
2. Being capable of applying participatory, comprehensive rational, and strategic planning processes innovatively in urban, village, city, regional, transportation, or urban design planning.
3. Being capable of using processes and methods for infrastructure planning and disaster mitigation, environmental management, information systems, urban management, and public policy.
4. Being capable of analyzing and evaluating problems in urban and regional planning using rational comprehensive, advocative, and innovative planning approaches.
5. Being capable of applying theories and methods in urban and regional planning for resilient village and city planning and development integration.
6. Being capable of formulating concepts and developing physical spatial plans considering socio-cultural, economic, institutional, and environmental aspects.

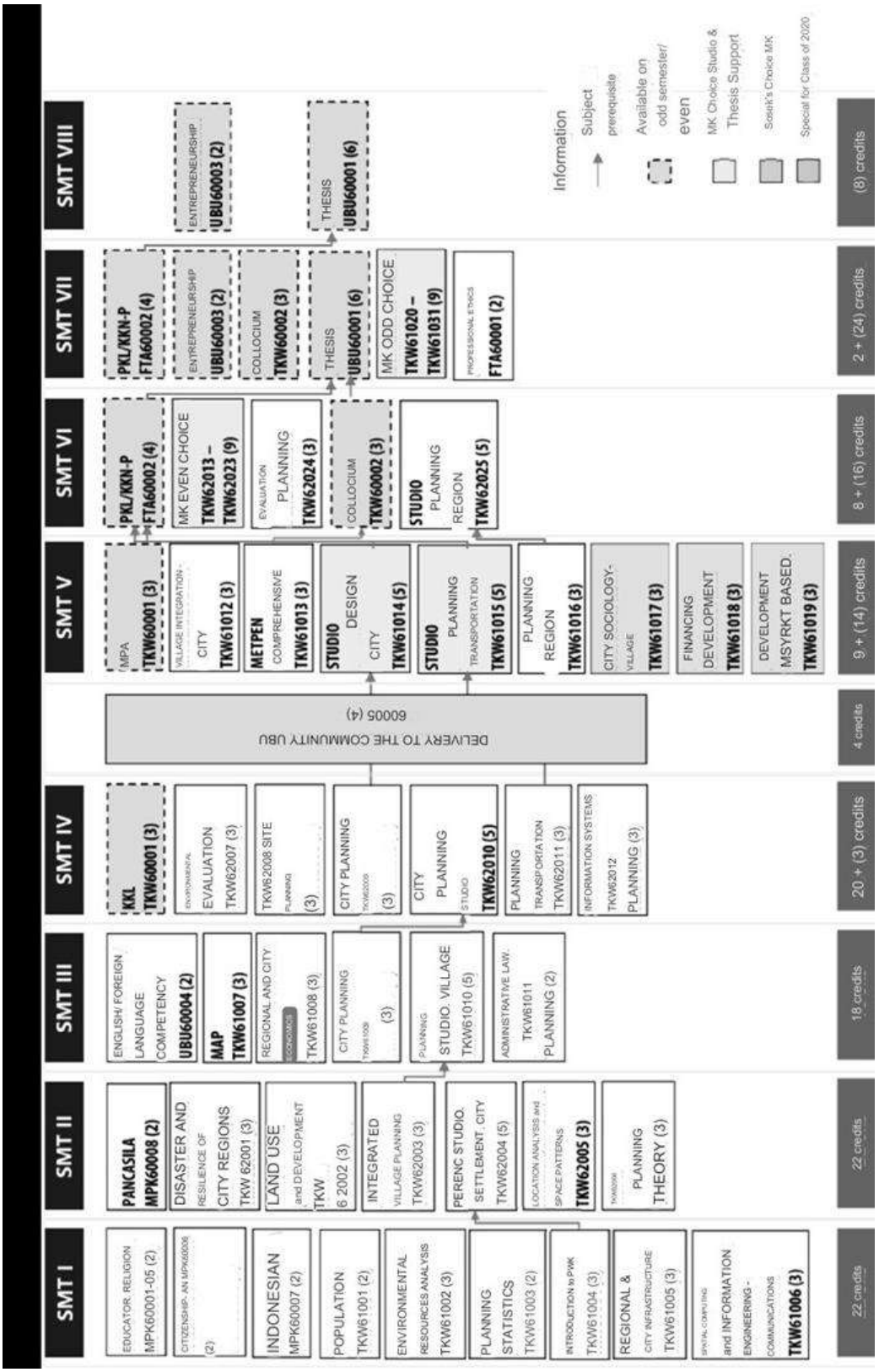
General Skills Competencies

1. Being capable of applying logical, critical, systematic, and innovative thinking in developing or implementing science and technology, considering and applying humanities values relevant to their field of expertise.
2. Being capable of demonstrates independent, high-quality, and measurable performance.
3. Being capable of assessing the implications of scientific and technological development or implementation, considering and applying humanities values in their field of expertise, based on scientific principles, procedures, and ethics, to generate solutions, ideas, designs, or artistic critiques.
4. Being capable of preparing scientific descriptions of their studies in the form of a thesis or final project report and uploading them on the university's website.
5. Being capable of making informed decisions in resolving problems in their field of expertise, based on an analysis of information and data.
6. Being capable of maintaining and developing a network of work relationships with advisors, colleagues, and peers both within and outside their institution.
7. Being capable of taking responsibility for achieving group work results and supervises and evaluating the completion of tasks assigned to workers under their responsibility.
8. Being capable of conducting self-evaluation processes for work groups under their responsibility and managing independent learning.
9. Being capable of documenting, storing, securing, and retrieving data to ensure validity and prevent plagiarism.

Special Skills Competencies

1. Being capable of conducting surveys in urban and regional planning fields, both individually and in groups, effectively and efficiently.
2. Being capable of presenting concepts and methods communicatively and providing assistance or facilitation for planning activities.
3. Being capable of preparing scientific papers and publications, including research or planning results.
4. Being capable of operating software applications that support research, planning, and design in urban and regional planning.
5. Being capable of demonstrating responsibility for work in their field of expertise independently or as part of a team and developing organizational and entrepreneurial skills, in accordance with legal, value, norm, and ethical standards.
6. Being capable of demonstrating responsibility for work in their field of expertise independently or within a team, and developing organizational and entrepreneurial skills in accordance with laws, values, norms, and ethics.

4. ACADEMIC REGULATIONS OF BACHELOR'S PROGRAM OF REGIONAL & URBAN PLANNING 2020-2021 – 2024-2025



4.1 Courses

The courses offered in the Bachelor's Program in Urban and Regional Planning (PS-S1 PWK) consist of: (a) University Core Courses, (b) Faculty Core Courses, (c) Program-Specific Interest-Based Courses, and (d) Program-Specific Elective Courses.

Compulsory and Elective Courses of Bachelor's Study Program (S-1) in Urban and Regional Planning

SEMESTER	NO	COURSE	CODE	CREDIT
SEMESTER I	1	Religion	MPK60001-60005	2
	2	Civic Education	MPK60006	2
	3	Bahasa Indonesia	MPK60007	2
	4	Demography	TKW61001	2
	5	Environmental Resources Analysis	TKW61002	3
	6	Planning statistics	TKW61003	2
	7	Introduction to Urban and Regional Planning	TKW61004	3
	8	Regional and Municipal Infrastructure	TKW61005	3
	9	Spatial Computation & Information-Communication Engineering	TKW61006	3
			Total Credits	**22**
SEMESTER II	1	Pancasila	MPK60008	2
	2	Regional and City Disaster and Resilience	TKW62001	3
	3	Land Use and Development	TKW62002	3
	4	Integrated Village Planning	TKW62003	3
	5	Urban Settlement Planning Studio	TKW62004	5
	6	Location & Spatial Planning Analysis	TKW62005	3
	7	Planning Theory	TKW620036	3
			Total Credits	**22**
SEMESTER III	1	English/Foreign Language Competency	UBU60004	2
	2	Planning Analysis Methods	TKW61007	3
	3	Regional and City Economics	TKW61008	3
	4	City Planning	TKW61009	3
	5	Village Planning Studio	TKW61010	5
	6	Planning Administration Law	TKW61011	2

			Total Credits	**18**
SEMESTER IV	1	Field Work (KKL)	TKW60001	3
	2	Environmental Evaluation	TKW62007	3
	3	Site Planning	TKW62008	3
	4	Urban Design	TKW62009	3
	5	Urban Planning Studio	TKW62010	5
	6	Transportation Planning	TKW62011	3
	7	Planning Information System	TKW62012	3
			Total Credits	**23**
SEMESTER	**NO**	**COURSE**	**CODE**	**CREDIT**
SEMESTER V	1	Rural-Urban Integration	TKW61012	3
	2	Comprehensive Research Methodology	TKW61013	3
	3	Urban Planning Studio or Transportation Planning Studio	TKW61014 TKW61015	5
	4	City Planning	TKW61016	3
	5	Socio-Economics Elective Course	TKW61017-61019	3
	6	Socio-Economics Elective Course	TKW61017-61019	3
			Total Credits	**20**
SEMESTER VI	1	PKL/KKN-P	FAT60002	4
	2	Even-Semester Elective Course	TKW62013-62023	3
	3	Even-Semester Elective Course	TKW62013-62023	3
	4	Even-Semester Elective Course	TKW62013-62023	3
	5	Planning Evaluation	TKW62024	3
	6	Colloquium	TKW60002	3
	7	Regional Planning Studio	TKW62025	5
			Total Credits	**24**
SEMESTER VII	1	Entrepreneurship	UBU60003	2
	2	Professional Ethics	FAT60001	2
	3	Bachelor's Thesis	UBU60001	6

	4	Odd-Semester Elective Course	TKW61020-61031	3
	5	Odd-Semester Elective Course	TKW61020-61031	3
	6	Odd-Semester Elective Course	TKW61020-61031	3
			Total Credits	**19**
			Overall Credits	**148**

Notes:

1. Students enroll in courses according to the curriculum diagram of the Bachelor's Program in Urban and Regional Planning (PS-S1 PWK).
2. In the first year, students take courses as a package system with a specified credit load of 22 credits each for the first and second semesters.
3. Course grades can only be issued at the end of the semester.
4. The Community Service Course (PKM) must be completed by students in accordance with the regulations of the Faculty of Engineering and the University.
5. Course grades can only be issued at the end of the semester.

4.1.1 Studio Courses

1. The Bachelor's Program in Urban and Regional Planning offers five synthetic, applicative, and prescriptive studio courses:

No.	Studio	CREDIT	Course Code	Semester
1.	Urban Settlement Planning Studio	5	TKW62004	II
2.	Village Planning Studio	5	TKW61010	III
3.	Urban Planning Studio	5	TKW62010	IV
4.	Transportation and Urban Planning Studio	5	TKW61014 TKW61015	V
5.	Regional Planning Studio	5	TKW62025	VI

2. Students may enroll in prerequisite courses if they have previously completed the prerequisite courses with a minimum passing grade of C.
3. In one semester, students may take a maximum of one studio course.

4.1.2 Elective Courses

1. The Bachelor's Program in Urban and Regional Planning offers 23 elective courses designed to enrich and enhance students' skills, as well as to support their interests and

the themes of their theses. These elective courses are available in both the Odd and Even semesters.

2. In the Academic Curriculum for the Bachelor's Program in Urban and Regional Planning for the years 2020/2021 to 2024/2025, the offered elective courses are

ODD SEMESTER ELECTIVE COURSE			
Category I	**CODE**	**SEMESTER**	**CR**
1. Property Management and Planning	TKW62013	6	3
2. Urban Management	TKW62014	6	3
3. Urban Landscape Studies	TKW62015	6	3
4. Environmental Management Related to Climate Change	TKW62016	6	3
5. Environmental Management and Planning	TKW62017	6	3
6. Renewable Energy Management	TKW62018	6	3
Category II			
1. Planning for Disaster-Prone Areas	TKW62019	6	3
2.Coastal and Small Island Planning	TKW62020	6	3
3. Watershed Planning	TKW62021	6	3
4. New Autonomous Regional Planning	TKW62022	6	3
5. Sustainable Village Planning and Design	TKW62023	6	3

ODD SEMESTER ELECTIVE COURSE			
Category III	**Code**	**Semester**	**CR**
1. Tourism Studies	TKW61020	7	3
2. Poverty, Conflict, and Public Policy	TKW61021	7	3
3. Border Area Studies	TKW61022	7	3
4. Industrial Area Planning	TKW61023	7	3
5. City Morphology	TKW61024	7	3
6. Environmental Perception and Spatial Behavior	TKW61025	7	3
Category IV			
1. Heritage City Preservation	TKW61026	7	3
2. New City Planning	TKW61027	7	3
3. Sustainable Infrastructure	TKW61028	7	3
4. Water Transportation	TKW61029	7	3

5. Sustainable Transportation	TKW61030	7	3
6. Planning Information System Application	TKW61031	7	3

3. Each semester, the elective courses offered depend on the resources available to the Bachelor's Program in Urban and Regional Planning, with a maximum enrollment of 20-25 students per course.
4. Each student is required to select 6 elective courses, totaling 18 credits, to be completed over 2 semesters, namely the Odd and Even Semesters.
5. If a student takes more than 6 elective courses, the additional courses may be listed on the Academic Transcript; however, only the grades from the best 6 courses will be considered in the GPA calculation.

4.2 Learning Components

The learning components in the Bachelor's Program in Urban and Regional Planning consist of three main parts: foundation, core, and capstone. The foundation section comprises courses that equip students with concepts, spatial understanding, and research methods used in the field of Urban and Regional Planning. These courses aim to provide the fundamental competencies necessary for a planner, accommodating students from various disciplines and fields of study.

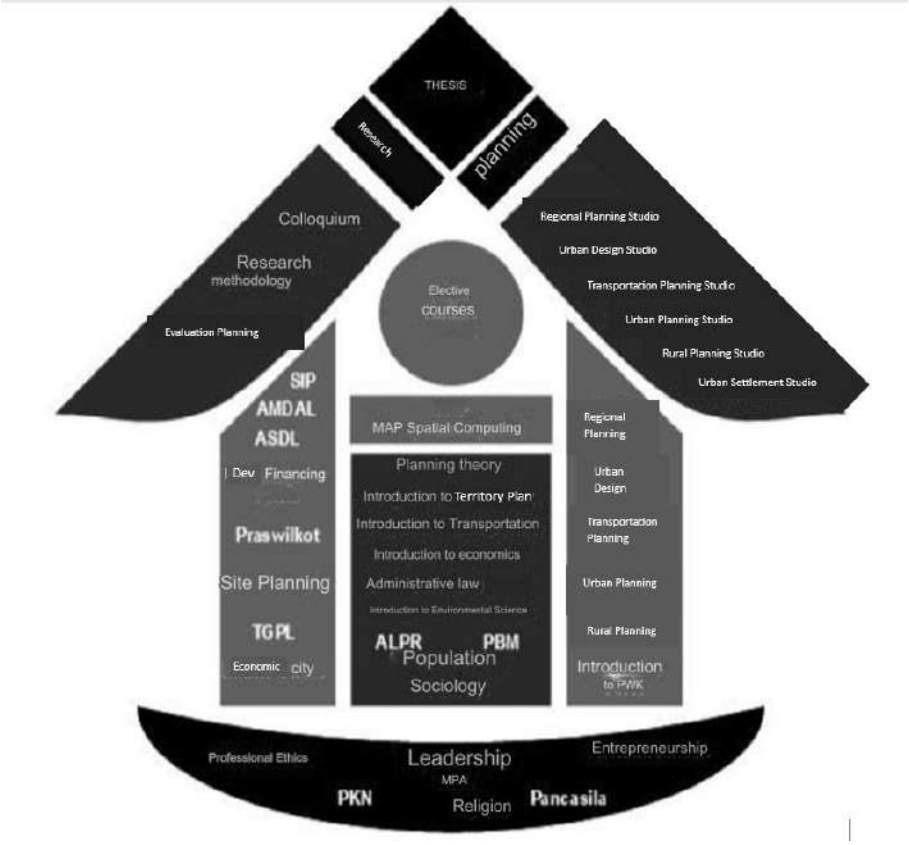


Diagram of Learning Components of Bachelor's Program (S-1) in Urban and Regional Planning

5. ACADEMIC RULES IN BACHELOR'S PROGRAM IN URBAN AND REGIONAL PLANNING (S-1)

5.1 Internship

A. Requirements for Student Participation in the Internship Course:

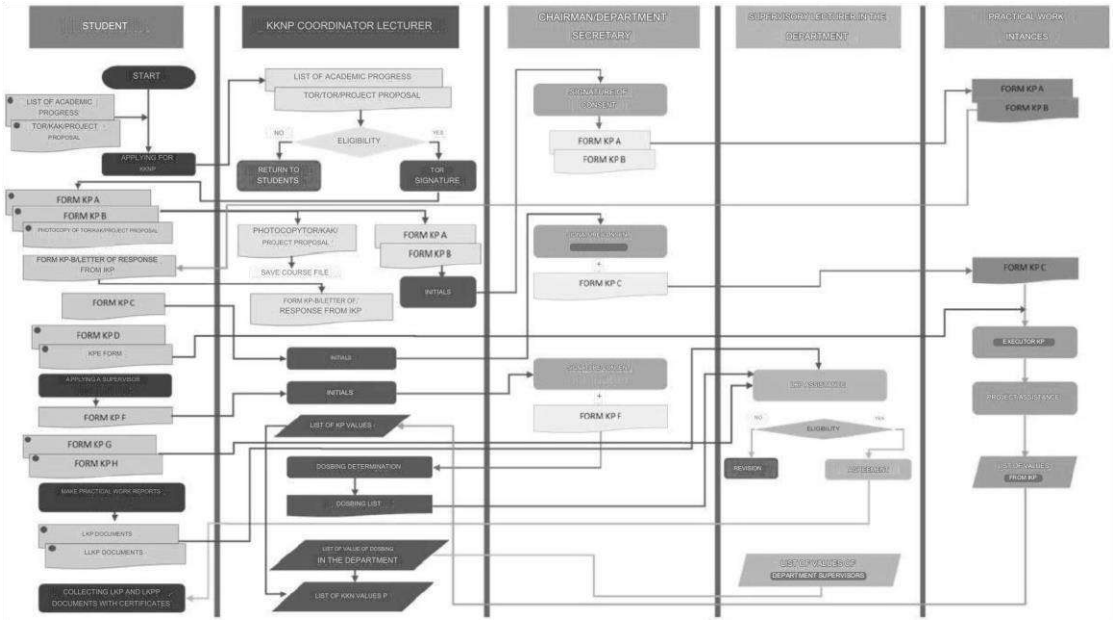
1. Requirements for Submitting the Internship Application (Form A):
   a. Completion of courses totaling a minimum of 85 credits;
   b. Passing the Urban Planning Studio Course (SPK) with a minimum grade of C.
2. Requirements for Enrolling in the Internship Course (PKL):
   a. Completion of courses totaling a minimum of 105 credits;
   b. Passing either the Urban Design Studio Course or the Transportation Planning Studio Course with a minimum grade of C;
   c. The subject matter of the internship must be related to the field of planning, and the internship institution must have a field supervisor with at least a Bachelor's degree in Engineering or Urban and Regional Planning.

B. Internship Subjects Available to Students

1. Government projects or activities related to urban and regional planning or other related fields;
2. Private sector projects or activities related to urban and regional planning or other related fields;
3. Community service activities under the *Doktor Mengabdi* (DM) scheme.

C. Steps to Complete the Internship Course (PKL)

1. Managing and completing administrative procedures to obtain information on internship opportunities;
2. Submitting a request letter to obtain a Field Supervisor at the internship institution;
3. Participating in part or all of the internship activities at the internship institution, which includes preparing a Preliminary Report – Interim Report (Facts & Analysis) – Final Report (Plan);
4. Preparing the Internship Report (LKP) after completing the internship, under the guidance of the PKL Supervising Lecturer for consultation/assistance;
5. Submitting the Internship Report (LKP), including two hard copies of the report and a soft copy of the Internship Report (LKP) and Attachments to the Internship Report (LLKP) on a CD or DVD;
6. Students are allowed to enroll in the Internship Course no later than one year after the internship period ends. If they fail to enroll within the specified time frame, they are required to find a new internship subject



The Diagram of Internship Program Procedures for Bachelor's Program (S-1) in Urban and Regional Planning, Faculty of Engineering-UB

5.2 Field Work Course (KKL)

5.2.1 General

- The Field Work Course (KKL) aims to encourage students to understand and grasp sustainable planning practices in developed and developing countries and to adopt these practices in formulating urban and regional development strategies.
- KKL consists of the following field activities and coursework:
  - ✓ Field activities such as overseas study tours, short courses or training sessions both domestically and internationally, youth or student exchange programs abroad, international scientific competitions, or international seminars held domestically or abroad.
  - ✓ Coursework activities conducted after students enroll in the KKL course, which include face-to-face sessions with the KKL course instructors, presentations, report preparation, and evaluation.

5.2.2 Types of Field Activities

1. Study tours at educational or planning institutions abroad involve visits to institutions to discuss and explore educational programs in urban and regional planning and the application of planning concepts in the host country.
2. Short courses or training sessions abroad involve brief academic courses or training sessions hosted by foreign educational or planning institutions or other relevant international organizations. Students receive academic materials in urban and regional planning through lectures, discussions, field visits, or other relevant supporting activities.

3. Youth or student exchange programs abroad. These programs are organized by international youth organizations focusing on the role of youth in addressing socio-cultural, environmental, and sustainable development issues. Participants actively share ideas or thoughts with peers from other countries through panel discussions, seminars, or campaigns.
4. International scientific or technological competitions include competitions in urban and regional planning or environmental design held internationally. The activities may involve scientific papers (essays/papers) or design projects. Students employ comprehensive analysis and can participate individually or in groups.
5. International seminars. In these activities, students individually present and discuss their papers in a foreign language. Students have the opportunity to publish their work and broaden their perspectives through discussions with other participants.

5.2.3 General Requirements for the KKL Course

1. Students have completed at least 62 credits.
2. The field activity content must relate to urban and regional planning and involve active use of a foreign language.
3. Field activities must be approved by the KKL coordinator (Form KKL-01). The proposed field activity must include a Letter of Acceptance, Terms of Reference, Proposal, Syllabus, or Brochure for Call for Papers.
4. Physical participation in field activities must have parental or guardian approval.
5. Field activities must be supervised or accompanied by a lecturer Urban and Regional Planning UB. The supervising lecturer may join the field activity in person or monitor it online.
6. After completing the KKL activity, students must provide proof of attendance signed by both the PWK-UB supervising lecturer and the facilitator from the hosting institution.
7. Post-activity supervision requests are not allowed.
8. Field activities are categorized into active and passive types. Active activities require students to interact actively, while passive activities involve students attending as listeners/observers.
9. Students may choose to participate in either one active activity or three passive activities.
10. Students must participate in one active activity or three passive activities.

5.2.4 Specific Requirements

1. Study Tours to Educational or Planning Institutions Abroad.
    - ✓ Comparative study is classified as an active activity.
    - ✓ The institution visited must be relevant to the field of urban and regional planning and located abroad.
    - ✓ The comparative study may involve visits to relevant projects in the field of urban and regional planning, such as MRT development projects and smart city initiatives.
2. Short Courses or Training Abroad or Domestically.
    - ✓ Short courses are classified as active activities.

- ✓ Activities must be organized or facilitated by educational institutions or international organizations located abroad.
- ✓ Training activities held domestically must be organized by or in collaboration with relevant international institutions.
- ✓ Approved training topics for KKL field activities must relate to concepts or strategies in regional or urban planning.
- ✓ Training on analysis methods or computer application tutorials is not permitted as KKL field activities.
- ✓ Field activities may include classroom lectures, workshops, internal seminars, and visits to relevant sites.

3. Youth or Student Exchange Programs Abroad
   - ✓ Youth or student exchanges are classified as active activities.
   - ✓ Activities must be organized by relevant international youth organizations.
   - ✓ Activity topics or presentations must align with urban and regional planning, such as environmental issues, sustainable development, energy, etc.
4. International Scientific or Technological Competition
   - ✓ Scientific competitions are classified as active activities.
   - ✓ Activities can be held domestically or abroad by reputable institutions relevant to science and technology development.
   - ✓ Participation in these competitions must involve the process of creation, analysis, presentation, and discussion within an international forum. Winning the competition is not required.
   - ✓ Competitions must be international, proven by online registration and participation of at least two foreign participants.
   - ✓ Scientific competitions must be supervised by at least one PWK lecturer from the proposal stage.
5. International Seminars
   - ✓ Activities can be held domestically or abroad by reputable institutions relevant to science and technology development.
   - ✓ Participation in international seminars can be either active or passive.
   - ✓ Active participation involves presenting independently, where one paper can only be used for KKL by one student, who must actively participate in the discussion.
   - ✓ Papers can be authored by a PWK UB lecturer, who assigns the student to present and discuss at the international seminar.
   - ✓ If the paper is authored by the student, it must be supervised by a PWK UB lecturer and include the lecturer's name.
   - ✓ The paper must be published in the seminar proceedings, either in print (abstract or full paper) or online, or in a journal.
   - ✓ For passive participation, students must attend three different presentation and discussion sessions or three international seminars.

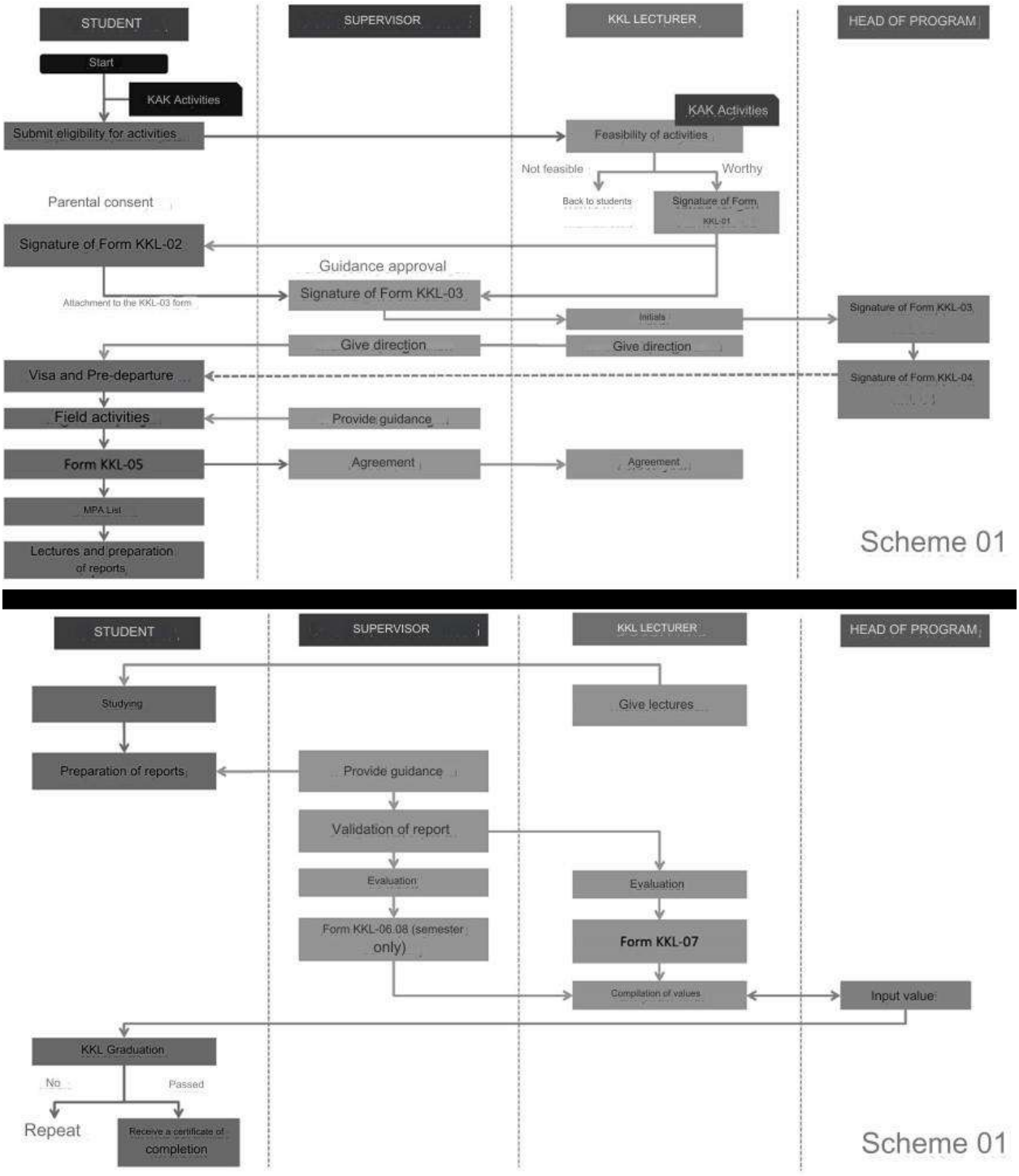
5.2.5 Reporting and Evaluations

Students must prepare and submit an activity report as part of the evaluation process and course output, with the following provisions:

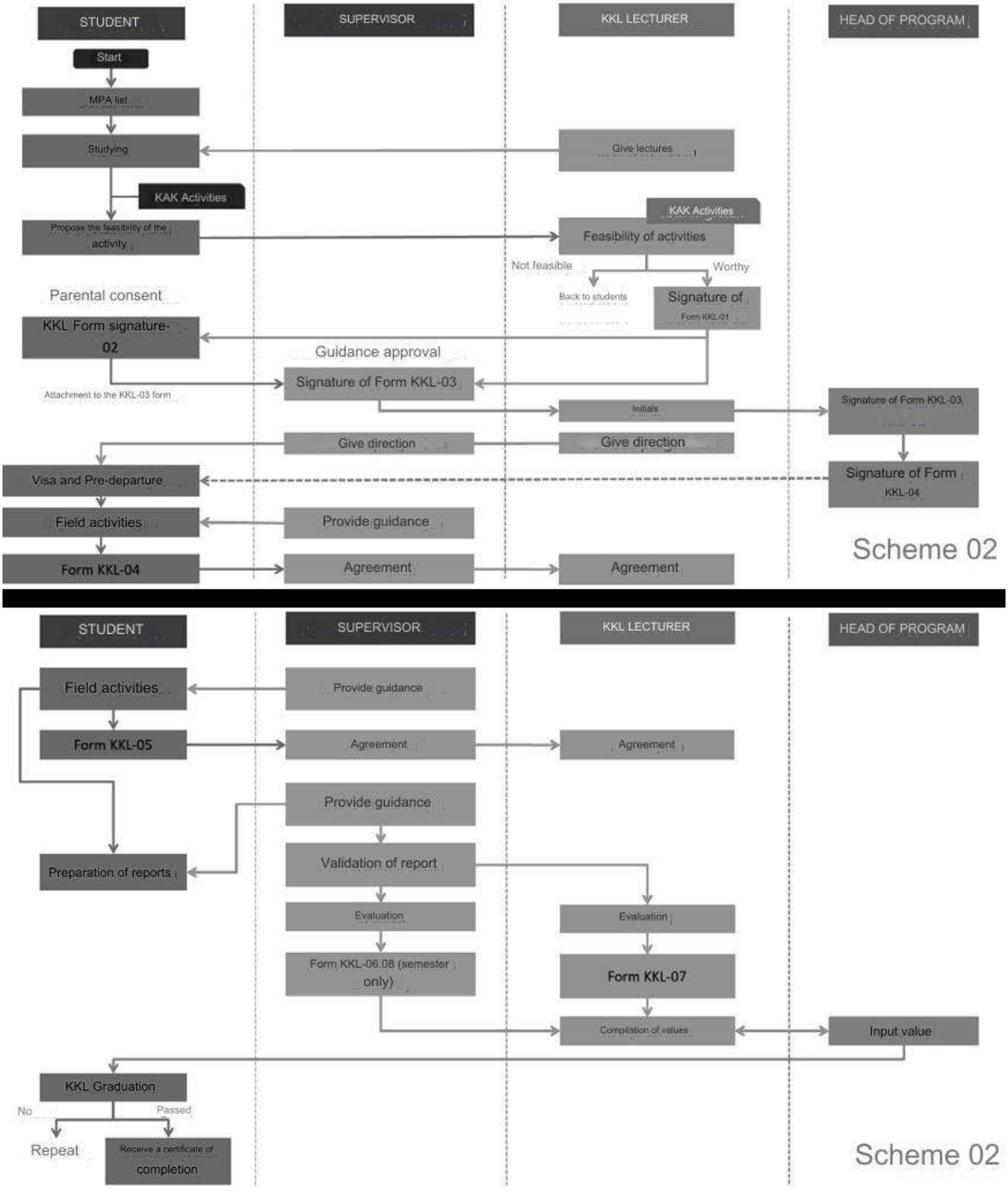
- The report must be prepared individually.
- Students must include a certification sheet signed by the supervising lecturer.
- The report must contain at least: introduction, detailed activities including schedules; daily activity notes and documentation; substantive discussion of activities related to urban and regional planning; conclusion and appendices. Appendices should include copies of the KKL activity feasibility form, attendance proof, paper (if required), summary of presentation slides, and certificates obtained from the activity organizer (if any).
- Evaluation is conducted by the supervising lecturer and the KKL course instructor.
- Evaluation involves assessing the KKL report.

5.2.6 KKL Course Procedures

1. Field activities can be conducted before enrolling in the KKL course or during the KKL semester. Requirements for field activities are outlined in the general and specific requirements.
2. Field activities before enrolling in the KKL course follow these steps:
    - ✓ Students (individually or in groups) submit the activity feasibility application with the required documents.
    - ✓ For activities conducted outside the city, parental approval is required.
    - ✓ For activities abroad, the department will issue a Statement Letter for visa application.
    - ✓ Before departure, all participants in overseas activities must undergo pre-departure preparations guided by the Supervising Lecturer and KKL Course Instructor.
    - ✓ After the field activity (domestic or abroad), participants must prepare attendance proof signed by both the supervising lecturer of the Department of Urban and Regional Planning UB and the host institution supervisor, and the KKL coordinator.
    - ✓ Students enroll in the KKL course.
3. Field activities after enrolling in the KKL course follow these steps:
    - ✓ Enrolling in the KKL course.
    - ✓ Submitting the KKL feasibility application and conduct field activities as outlined in step 2.
4. KKL Course Activities include:
    - ✓ The KKL course includes face-to-face lectures, report preparation, presentation, and evaluation.
    - ✓ The supervising lecturer is responsible for assisting with report preparation and grading.
    - ✓ The KKL course instructor is responsible for delivering face-to-face lectures and evaluating presentations.



The Diagram of KKL Course Pathway for Bachelor's Program in Urban and Regional Planning (Model 1)



The Diagram of KKL Course Pathway for Bachelor's Program in Urban and Regional Planning (Model 2)

5.3 Awards for Outstanding Students

5.3.1 General

- Awards for students represent appreciation, recognition, and reward in the form of exemption from Bachelor's thesis requirements for students who excel academically in scientific competitions and the publication of scientific works. These awards aim to enhance student achievements, creativity, and productivity, serving as an inspiration and motivation within the educational sphere.
- Bachelor's Thesis exemption awards exempt students from the Seminar Results Examination and the Thesis Defense Examination for scientific works deemed equivalent to a thesis

5.3.2 Types of Activities Eligible for Awards

1. Scientific Work Competitions:
   a. Competitions are organized by:
      ✓ International organizations;
      ✓ National Government Agencies: LIPI, BPPT, Ministry of Research, Technology and Higher Education, and other equivalent ministries;
      ✓ Universities in collaboration with international institutions;
      ✓ Leading national companies.
   b. The topic of the scientific work must align with the academic field of Urban and Regional Planning.
   c. Students who participate in PIMNAS and win First Prize (Gold).
   d. The provision in point c applies to scientific competitions in *Pekan Kreativitas Mahasiswa* (PKM) organized by DIKTI, including PKM-P and PKMK.
   e. For other scientific competitions beyond PKM DIKTI, only students who win First Prize are exempted from the thesis.
   f. There should be a maximum of three participants per scientific competition. If there are more than three participants, the exemption applies to the first three authors: the leader, the second author, and the third author.
   g. These provisions apply to all cohorts within the Department of Urban and Regional Planning, Universitas Brawijaya.
2. Authors in Reputable/Indexed International Journals:
   a. Students are as first authors in reputable/indexed international journals (Scopus, ISI Thomson Reuters, Microsoft Macro Media, Ebsco, Proquest, etc.), and other journals recognized by the Ministry of Research, Technology and Higher Education.
   b. The journal topic must be relevant to the field of Urban and Regional Planning.

5.3.3 Requirements for Award Activities

1. Activities conducted by students seeking Bachelor's Thesis Exemption Awards must have undergone a supervision process equivalent to a thesis, supervised by at least one competent lecturer appointed by the department/faculty or with other supporting evidence of supervision.
2. Students are required to rewrite and adjust their PKM results, other scientific works, or journals to the thesis format, adhering to the following:
    - The thesis document must follow the writing format of the Faculty of Engineering and the Department of Urban and Regional Planning, Universitas Brawijaya.
    - The content of the thesis document must align with the typical thesis content in the Department of Urban and Regional Planning and must be relevant to the field of Urban and Regional Planning.
3. The rewritten scientific works and international journals must be evaluated for equivalence to a thesis by the Department Evaluation Team.

5.3.4 Award Application Procedure

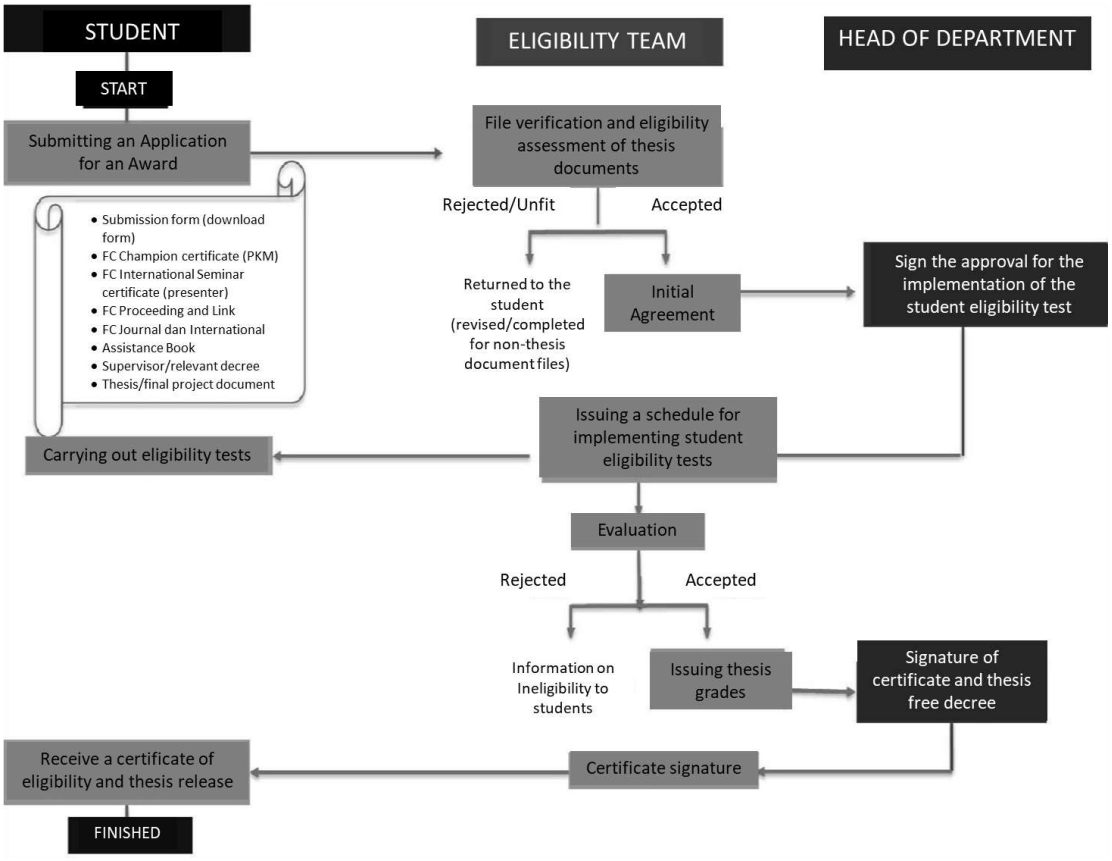
1. Students must submit an application for the award, including supporting documents, before the Scientific Work Feasibility Evaluation, which consists of:
    - Application Form.
    - Photocopy of the award certificate (Pimnas, PKM).
    - Photocopy of the journal and the link to the journal publication;
    - Supervising Lecturer's appointment letter or other relevant supporting letters;
    - Evidence of assistance during the activity process and the rewriting of the scientific work in the thesis format;
    - The thesis document resulting from the rewriting of the scientific work and international journal.
2. Students can apply for the thesis exemption after completing the scientific work competition, journal publication, and rewriting the scientific work and journal into a thesis format.
3. The Scientific Work Feasibility Evaluation Team will assess the supporting documents as administrative requirements and the scientific work document rewritten in the thesis format as a requirement for the Feasibility Test in the form of a presentation of the scientific work results.
4. The Evaluation Team will assess the feasibility of the thesis document, including its content and relevance to Urban and Regional Planning.
5. Students whose thesis documents are deemed feasible will be scheduled to present their scientific work results before the Evaluation Team to determine the thesis grade.
6. The Feasibility Test in the form of a scientific work presentation is conducted after the student has passed the proposal seminar exam.
7. The Scientific Work Feasibility Evaluation Team will issue feasibility grades and thesis grades to students who are declared to have passed and meet the requirements for thesis

exemption, and these results will be forwarded to the Department of Urban and Regional Planning administration office.

8. Students will receive a certificate of the feasibility grade from the Evaluation Team and a Thesis Exemption Certificate.

5.3.5 Feasibility Evaluation Team

1. The Feasibility Evaluation Team consists of the Final Project/Thesis Coordinator, the Head of the Undergraduate Program, one Supervising Lecturer (who supervised the preparation of the scientific work and journal), and one Examiner Lecturer.
2. The Feasibility Evaluation Team is appointed by at least the Dean's decree.
3. The Feasibility Evaluation Team functions as the Evaluation Team for activities proposed for Thesis Exemption Awards, assessing the thesis document and issuing feasibility grades.
4. The Feasibility Evaluation Team determines the thesis grade for students receiving the Bachelor's Thesis Exemption Award.



The Diagram of Bachelor's Thesis Exemption Award Application Pathway of Urban and Regional Planning

5.4 Colloquium & Bachelor's Thesis

5.4.1 Requirements for Colloquium and Thesis Courses

A. Colloquium Requirements

1. Students must have completed and passed the Comprehensive Research Methodology course with a minimum grade of C.
2. Students must have an officially appointed thesis advisor, as authorized by a Dean's Decree.

B. Thesis Requirement

1. Students must have completed and passed the Colloquium course with a minimum grade of C.
2. Students must have completed and passed all Studio courses with a minimum grade of C.
3. Students must have completed and passed the Internship course with a minimum grade of C.
4. Students must have completed and passed a minimum of 136 credits (both compulsory and elective courses).

5.4.2 Requirements and Procedures for Thesis Proposal Examination

A. Proposal Examination Requirements

1. Proposal Examination Approval Form.
2. Assistance logbook from both advisors.
3. Draft of the thesis proposal.

B. Procedures

1. Students are required to upload their assistance results to the Thesis Information System of the Department of Urban and Regional Planning (PWK) after each colloquium assistance session.
2. There are two stages of proposal examination/assessment that students must undergo.
3. The Colloquium course grade will be issued at the end of the semester, provided that:
   a. Students have conducted the proposal examination and attended the Colloquium course with a minimum attendance of 80%.
   b. Students have met the requirement of a minimum of six assistance sessions with their thesis advisors.
4. Proposal examinations are scheduled on the third Monday of each month.
5. The proposal examination must be attended by one moderator and at least three other students.
6. Students who do not pass the proposal examination can retake it in the same semester according to the schedule available in the Department Thesis Information System of Urban and Regional Planning to obtain the Colloquium course grade.
7. If students still do not pass the Colloquium course in the current semester, they may retake the Colloquium course in the following semester.

5.4.3 Requirement and Procedures for the Intermediate Seminar

A. Requirements for the Intermediate Seminar

Before conducting the Final Seminar, students must participate in the Intermediate Seminar. This seminar serves as an assessment by the Supervising Lecturers of the data compilation from the research/thesis conducted by the students. Students must register for the Intermediate Seminar with the Thesis Management Team and meet the following requirements:

a. Having obtained approval for the Intermediate Seminar from both supervising lecturers through the Intermediate Seminar Eligibility Approval Form;
b. Having had at least one consultation session with both supervising lecturers.

B. Procedures for Conducting the Intermediate Seminar

1. The Intermediate Seminar is held on the first and third Monday of each month;
2. Students must conduct the Intermediate Seminar no later than four (4) months after enrolling in the Final Project/Thesis course;
3. The Intermediate Seminar is open to attendance by lecturers and moderators;
4. The draft report for the Intermediate Seminar must be submitted to the supervising lecturers no later than two (2) days before the seminar;
5. The grade from the Intermediate Seminar will be part of the student's Final Seminar grade and is a prerequisite for proceeding to the Final Seminar/Exam. The minimum passing grade for the Intermediate Seminar is 70 (B);
6. If a student does not meet the passing standards or assessment criteria, they must repeat the Intermediate Seminar. The maximum number of attempts for the Intermediate Seminar is three, within a maximum period of 12 months from the initial enrollment in the Final Project/Thesis course;
7. If a student fails to meet the passing standards in the repeat Intermediate Seminar or does not conduct the seminar within 12 months of initial enrollment in the Final Project/Thesis course, they must change their research/thesis title.

5.4.4 Requirements and Procedures for Bachelor's Thesis Results Seminar

A. Requirements for Bachelor's Thesis Results Seminar

Students must register for the Thesis Seminar with the Thesis Management Team through the Department's Thesis Information System by uploading the following requirements:

a. Having obtained approval for the seminar from both supervising lecturers through the Bachelor's Thesis Results Seminar Eligibility Approval Form and the Intermediate Seminar Suggestions Sheet, with improvements approved by both supervisors;
b. Having conducted at least two joint consultation sessions between the student and both supervising lecturers;
c. Requirements to participate in the Research/Thesis Results Seminar are:
    1. Thesis results seminar Eligibility Form;
    2. Academic Transcript (from the Department's Recording File);

3. Proof of Thesis Plagiarism (demonstrated with a file showing the student's plagiarism rate, which must be below 20%);
4. Proof of attending at least 10 Final Seminars of other students of Urban and Regional Planning;
5. S01-A (for requirement number 1 point D, it can be left blank at the time of Thesis Results Seminar registration);
6. Suggestions Sheet from the Intermediate Seminar, approved by the supervisors and examiners for the thesis defense;
7. Draft Thesis Report;
8. Draft Article or Research Journal.

B. Procedures for Conducting Bachelor's Thesis Results Seminar

1. The seminar is held on the second Monday of each month;
2. The Seminar is open and can be attended by lecturers and students;
3. The Seminar must be attended by a minimum of 10 students;
4. The Draft Report for the Seminar must be submitted to the supervising lecturers and examiners no later than two (2) days before the seminar;
5. If both supervisors are unable to attend, the student's Final Seminar will be rescheduled to the next available Final Seminar session or conducted according to an agreement between the supervisors and examiners, with the knowledge of the Thesis Management Team;
6. The maximum period for students to revise their thesis report after the Seminar is three (3) months. If this period is exceeded, the student must repeat the Seminar according to the schedule provided in the Department's Thesis Information System.

5.4.5 Requirements and Procedures for the Bachelor's Final Thesis Defense

A. Requirement for the Bachelor's Final Thesis Defense

Students must register to participate in the Final Thesis Defense with the Thesis Management Team through the Department's Thesis Information System by downloading/uploading the following requirements:

a. Having obtained approval for the Final Thesis Defense from the supervising lecturers and examiners through the Thesis Defense Eligibility Form and the Bachelor's Thesis Results Seminar Suggestions Sheet, which has been initialed;
b. Having conducted at least two consultation sessions with the supervising lecturers and examiners;
c. Requirements to participate in the Final Research/Thesis Defense are:
    1. Suggestions Sheet from the supervising lecturers and examiners, which has been approved for the thesis defense.
    2. Draft Thesis Report.
    3. Draft Article or Research Journal.
    4. Clearance from the Library of Universitas Brawijaya (as part of S01B).
    5. Clearance from Alumni Association of the Faculty of Engineering, Universitas Brawijaya (as part of S02).

B. Procedures for the Bachelor's Final Thesis Defense

1. The Final Thesis Defense is held on the fourth Monday of each month.
2. The Final Thesis Defense must be attended by at least one supervising lecturer and one examiner.
3. If both supervisors are unable to attend, the student's thesis defense will be rescheduled to the next available Final Thesis Defense session or conducted according to an agreement between the supervisors and examiners, with the knowledge of the Thesis Management Team.
4. The Draft Report for the Final Thesis Defense must be submitted to the supervising lecturers and examiners no later than two (2) days before the defense.
5. The maximum period for students to revise their thesis report after the thesis results seminar is one (1) month. If this period is exceeded, the student must repeat the Final Thesis Defense according to the schedule provided in the Department's Thesis Information System.

5.5 Examinations

a. The Mid-Semester Examination (UTS) and End-Semester Examination (UAS) for the Undergraduate Program (S-1) in Urban and Regional Planning (PWK) are organized by the Examination Committee appointed by the Department Management and are conducted according to the Academic Calendar of Universitas Brawijaya.
b. The requirement to participate in the UAS is a minimum student attendance rate of 80% of the total lecture sessions, which should be at least 14 meetings.
c. A special examination may be granted to students in the Bachelor's Program (S-1) in Urban and Regional Planning who are preparing for the Final Examination/Defense but have a Cumulative Grade Point Average (CGPA) of less than 2.00 and/or have more than 10% of their grades as D/D+ and/or have any E grades. The special examination can only be taken once during the student's study period and is subject to the following conditions:
    - ✓ The course must have been previously attempted.
    - ✓ All other academic prerequisites must have been completed.
    - ✓ The maximum credit load for the special examination is 9 credits.
    - ✓ The highest achievable grade is C.
    - ✓ The administration mechanism is determined by the program management.
d. Remedial examinations may be offered to students in the Bachelor's Program (S-1) in the department, provided that the students have participated in all academic activities related to the course in the semester it was taken. The remedial examination is available for courses with grades no higher than C+, and the final grade will be the better of the two attempts, with a maximum grade of B+. The administration of remedial examinations will be in accordance with the policies of the program management.

5.6 Lecture Attendance Permission

A. Application for Permission to Miss Lectures
    1. Permission due to illness.

2. Permission due to family events.
3. Permission to participate in Field Work Courses (KKL).
4. Permission to participate in Internships (PKL), consisting of:
    a. Permission for survey activities;
    b. Permission to attend team presentations/discussions.
5. Permission to represent the university in academic, sports, arts, and other activities

B. Conditions for Lecture Attendance Permission
    1. Medical Leave Certificate
        a. Submit a permission letter signed by a parent/guardian.
        b. Attach a medical certificate from a doctor.
        c. The permission letter must be submitted no later than 2 weeks after the illness.
        d. The permission letter can be submitted personally or through a representative.
    2. Permission for Family Events
        a. Submit a permission letter signed by a parent.
        b. The permission letter must be submitted no later than 3 days after the date of absence.
        c. The permission letter must be submitted personally and cannot be represented.
    3. Permission for Field Work Courses
        a. Submit a permission letter signed by the KKL coordinator.
        b. The permission letter can be individual or group-based (for the same KKL location).
        c. The permission letter must be submitted before departing for the KKL location.
    4. Permission for Internships (PKL)
        a. Survey Permission
            - Submit a permission letter signed by the Company Leader or Team Leader of the PKL activity.
            - The permission letter must be submitted before the survey activity.
            - The permission letter must be submitted personally and cannot be represented.
        b. Permission to attend team presentations/discussions
            - Submit a permission letter signed by the Company Leader or Team Leader of the activity.
            - The permission letter must be submitted before the activity.
            - The permission letter must be submitted personally and cannot be represented
    5. Permission to represent the university
        a. Submit a permission letter signed by the Student Affairs Office.
        b. The permission letter must be submitted before the activity.
        c. The permission letter must be submitted personally and cannot be represented.

C. Permission to miss lectures is limited to a maximum of 20% of the total face-to-face sessions in a course.

D. The permission letter must be acknowledged by the course instructor and the academic affairs in a course.

E. Special Conditions for Permission
   1. During the pandemic, all types of permission letters follow the same procedures as outlined above, but submission is done via email to the Academic Affairs Department and the course instructor.
   2. Other special conditions will be regulated separately.

5.7 *Merdeka Belajar-Kampus Merdeka* (MBKM)

- *Merdeka Belajar -Kampus Merdeka*, as introduced in the Regulation of the Minister of Education and Culture Number 3 of 2020, is expected to relax regulations to facilitate the achievement of Indonesian National Qualifications Framework (KKNI) and the National Standards of Higher Education (SN Dikti). *Merdeka Belajar* is included in the learning process standards, offering a minimum of 4 semesters and a maximum of 11 semesters within the study program. One semester, or equivalent to 20 credits, involves learning outside the Study Program within the same Higher Education Institution; and a maximum of 2 semesters, or equivalent to 40 credits, involves: (1) Learning in the same Study Program at a different Higher Education Institution; (2) Learning in a different Study Program at a different Higher Education Institution; and/or (3) Learning outside Higher Education Institutions.
- the implementation of MBKM requires adjustments based on existing conditions, ensuring that the flexible learning process can be effectively implemented to achieve the specified CPL (Learning Outcome Standards). The CPL must be measurable through appropriate assessments. The Undergraduate Program in Urban and Regional Planning (PWK) at the Faculty of Engineering, Universitas Brawijaya offers CPL that can be achieved and measured in terms of success.
- The Bachelor's Program in Urban and Regional Planning (PWK) at the Faculty of Engineering applies MBKM in accordance with the University Standards for *Merdeka Belajar* as follows:
  1. Elective Courses: 28 credits of Elective Courses + 4 credits of Field Work Practice (PKL) mandatory for those not participating in *Merdeka Belajar* outside the university.
  2. *Merdeka Belajar* Options:1 semester, 2 semesters, and 3 semesters packages:
     a. Religion (2 credits)
     b. Pancasila (2 credits)
     c. Civics (2 credits)
     d. Bahasa Indonesia (2 credits)
  3. General Courses: Entrepreneurship, English, and Community Service can be taken in other programs within the university starting from the 1st semester (according to the structure of the PWK Undergraduate curriculum)
  4. *Merdeka Belajar* can be undertaken in other programs within or outside Universitas Brawijaya starting from the 6th semester or after completing the 5th semester
  5. Flexible Learning Implementation: 1 semester of *Merdeka Belajar* outside the study program within the university can be spread or taken in installments over several semesters.

6. Eight Forms of MBKM Activities are determined under the Decree of the Ministry of Education and Culture; the MBKM activities that can be accommodated by the Bachelor's Program in Urban and Regional Planning involve the following:
   a. Internships/practical work,
   b. Research,
   c. Humanitarian projects,
   d. Independent study/projects,
   e. Village development,
   f. Student exchange
7. Other programs outside the university refer to those that have established cooperation with Universitas Brawijaya, Faculty of Engineering, or the Bachelor's Program of Urban and Regional Planning at the university.
8. Regulations and Procedures for Taking credits in other programs within and outside the university must follow the regulations and SOPs of Universitas Brawijaya, Faculty of Engineering, and the Bachelor's Program of Urban and Regional Planning Undergraduate Program at the Faculty of Engineering, Universitas Brawijaya.

5.8 OBE (Outcome-Based Education)

Based on the UB Education Implementation Guidelines, the OBE-based learning process generally takes place through interactions between lecturers, students, and learning resources within a well-designed learning environment. Similarly, the OBE-based learning process for each course must also be carried out according to the Semester Learning Plan (RPS). The learning process through curricular activities must be conducted systematically and structurally across various courses with measurable study loads. What is distinctive about OBE is the assessment process conducted by lecturers to evaluate students' abilities. Like traditional learning processes, OBE-based learning must also use effective teaching methods appropriate to the characteristics of each course to achieve the specific competencies set for that course.

There are quite a few OBE-based learning methods that can be selected for course instruction, including: group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, problem-based learning, or other teaching methods that can effectively facilitate the achievement of Graduate Learning Outcomes (CPL). Each course uses one or a combination of several learning methods, which are incorporated into a particular form of learning. The forms of learning can include:

a. Lecture
b. Response sessions and tutorials
c. Seminars
d. Practicums, studio practice, field practice, internships;
e. Research, design, or development;
f. Student exchanges;
g. Internships;
h. Entrepreneurship; and/or

i. Other forms of community service.

In addition, forms of learning such as research, design, or development, and community service are activities undertaken by students under the guidance of lecturers to develop attitudes, knowledge, skills, authentic experiences, and to utilize science and technology to improve community welfare and national competitiveness. The forms of learning mentioned above can be conducted both within the study program and outside of it. Learning activities outside the study program consist of the following:

a. Learning within another study program at the same university;
b. Learning within the same study program at a different university;
c. Learning within another study program at a different university; and
d. Learning at a non-university institution.

The faculty evaluation procedure includes the stages of planning, assigning tasks or questions, performance observation, returning observation results, and assigning final grades. The evaluation procedure during the planning stage can involve phased assessments and/or reassessments. The implementation of the evaluation is carried out according to the learning plan, which measures the Course Learning Outcomes (CPMK), an aggregation of Sub-Course Learning Outcomes (Sub-CPMK). The appropriate form of assessment should be based on indicators of the achievement of the Course Learning Outcomes (CPMK). Instructors and students are expected to share a common understanding of the assessment model being used. Therefore, aligning perceptions regarding the CPMK to be achieved should be done from the outset, with the expectation that once students are aware of it, they can organize their independent learning model according to their learning style. When creating questions, assignments, and exams, instructors should consider the following characteristics:

a. Valid: tested for accuracy
b. Relevant: in accordance with competencies/outcomes
c. Specific: unbiased
d. Representative: represents elements of competency
e. Balanced: matches the complexity of the learning material
f. Transparent: aligns with the RPS agreed upon by both instructors and students

The forms of assessment and learning in the Bachelor Program of Urban and Regional Planning, Faculty of Engineering, Universitas Brawijaya (PS Sarjana PWK FTUB) include the following:

Assessment Type	**Learning Activity Assessed**
Essay	
Essay Examination	Answering questions and structuring answers accurately
Open book	Similar to essay exams but with limited memory and based on the breadth/coverage of answers

Take-home assignment	Reading broadly, connecting, organizing, and applying concepts
Objective Test	
Multiple Choice	Recognition, understanding strategy
Performance Assessment	
Practicum	Practical skills in real work
Seminar, presentation	Communication skills
Poster	Focus on relevance and application
Interview	Interactive responses
Critical Incident Interview	Reflection, application of feelings on relevance
Project	Application of skills in research
Journal Review	Reflection, application of feelings on relevance
Case Study	Application of professional skills
Portfolio	Reflection, creativity in desired outcomes
Quick Assessment (large group)	
Concept Map	Scope of relationships
Venn Diagram	Relationships
One-to-three-minute paper short	Level of understanding, selection of relevance
Short Answer	Recalling information, scope
Note to a friend	Holistic understanding, application, reflection

Based on the Graduate Learning Outcomes (Chapter 3), the Main Learning Outcomes of the Bachelor's Program in Urban and Regional Planning at FT UB are formulated as follows:

1. Understanding theoretical concepts and methods in the field of Urban and Regional Planning:
   a. Research knowledge – evaluation of planning and research methodology;
   b. Application of general planning – settlements, village planning, urban planning, regional planning, transportation, or urban design;
   c. Application of specialized planning – infrastructure, environment, information systems, urban management, public policy, disaster mitigation.

2. Ability to apply theory and methods in the field of Urban and Regional Planning for research activities and planning applications.
3. Ability to apply theory and methods in the field of Urban and Regional Planning for the integration of resilient village and city planning and development.

4. Ability to analyze and evaluate issues in the field of Urban and Regional Planning using rational comprehensive, advocative, and innovative planning approaches.
5. Ability to conduct surveys in the field of Urban and Regional Planning both individually and in groups effectively and efficiently.
6. Ability to operate software applications that support research, planning, and design in the field of Urban and Regional Planning.
7. Ability to formulate concepts and develop spatial physical planning by considering social, cultural, economic, institutional, and environmental aspects.
8. Ability to present methods, concepts, and ideas communicatively.
9. Ability to demonstrate independent, quality, and measurable performance, as well as to assess the implications of the development or implementation of science and technology in generating solutions, ideas, or designs.
10. Ability to compose descriptions of scientific studies, research, or community service results in the form of scientific reports, theses, or final project reports, and/or publish them as scientific articles.
11. Possessing organizational and entrepreneurial skills.

6. TRANSITIONAL REGULATIONS

The transition is intended to implement changes/adjustments from the old curriculum (2018-2020 curriculum) to the new curriculum (2020-2024 curriculum) that will be applied to students of the Bachelor's Program (S-1) in Urban and Regional Planning (PWK), with the following procedures:

1. The *inpassing* of the new 2020-2024 curriculum applies to new students and students who are not currently taking courses in the 7th semester, such as colloquium, professional ethics, entrepreneurship, and thesis, when the new curriculum is implemented.
2. Students who have not taken the new courses listed in the new curriculum are required to take those courses in the next semester according to the applicable rules.
3. Students who wish to improve their grades in courses from the 2018-2020 curriculum must take the new courses that have been converted in the 2020-2024 curriculum.
4. The *inpassing* rules do not apply uniformly and depend on the number of courses and credits (SKS) that have been taken by students, with the following rules:

    - ✓ For students who have completed 18 courses and 45 credits (SKS) in the 2018-2020 curriculum, the following apply:
        - ✓ Changes in the number of credits for the Community-Based Development course.
        - ✓ The Spatial Computing and ICT course in the 2020-2024 curriculum replaces the Mathematics and Spatial Computing course in the 2018-2020 curriculum. Grade adjustments will consider the best grades between the two courses in the 2018-2020 curriculum.
        - ✓ The Leadership course is replaced by the Bahasa Indonesia course, so students at this stage do not need to take Bahasa Indonesia in the 2020-2024 curriculum.
        - ✓ The Introduction to Environmental Science course in the 2018-2020 curriculum is replaced by the Disaster and Resilience in Regions and Cities course in the 2020-2024 curriculum.
        - ✓ The scheme of changes can be seen in the diagram below.

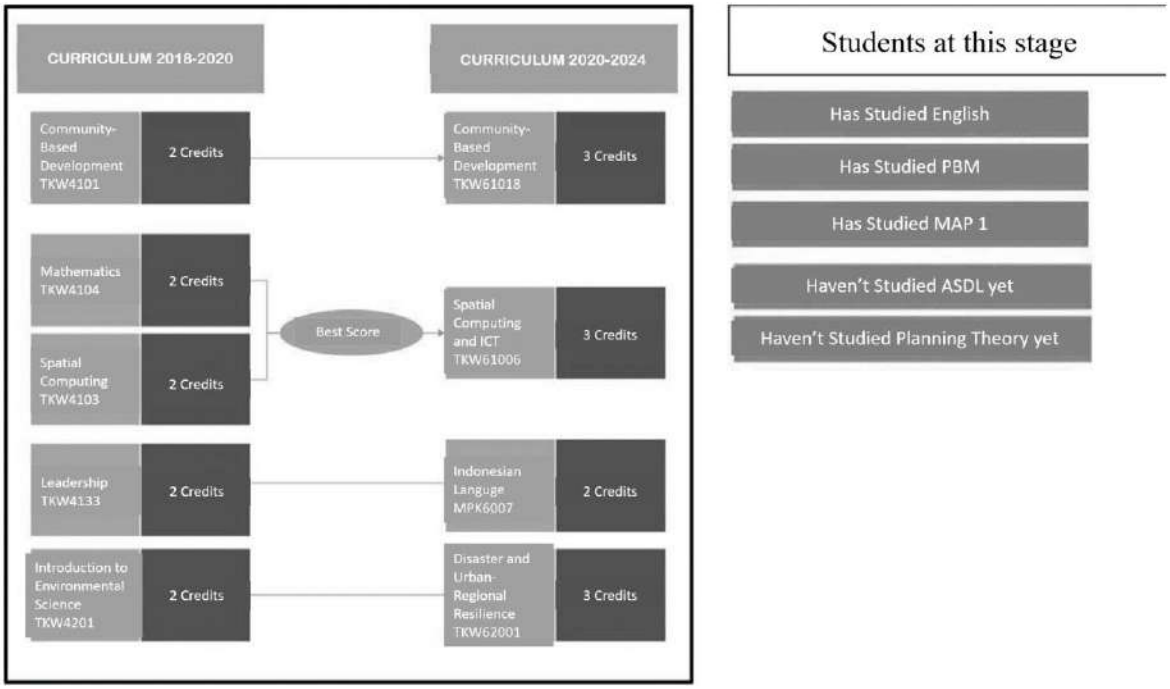


Diagram 1: *Inpassing* and Course Load for Students Having Completed 45 Credits in the Curriculum Year of 2018-2020

b. For students who have completed 33 courses and 92 credits (SKS) in the 2018-2020 curriculum

- ✓ The course 'Spatial Computing and Information Communication Engineering' in the 2020-2024 curriculum replaces the 'Mathematics and Spatial Computing' course in the 2018-2020 curriculum. The grade change will consider the best grade between the two courses in the 2018-2020 curriculum.
- ✓ The 'Leadership' course is replaced by the 'Bahasa Indonesia' course, so students at this stage do not need to take the 'Bahasa Indonesia' course in the 2020-2024 curriculum.
- ✓ The 'Introduction to Environmental Science' course in the 2018-2020 curriculum is replaced by the 'Regional-City Disaster and Resilience' course in the 2020-2024 curriculum.
- ✓ The 'City-Village Sociology' course in the 2020-2024 curriculum replaces the 'Sociology' and 'Introduction to Economics' courses in the 2018-2020 curriculum. The grade change will consider the best grade between the two courses in the 2018-2020 curriculum.
- ✓ The 'MAP 1' and 'MAP 2' courses in the 2018-2020 curriculum are replaced by the 'MAP' course in the 2020-2024 curriculum. The grade change will consider the best grade between the two courses in the 2018-2020 curriculum.
- ✓ Changes in the number of credits for the 'Community-Based Development' course.

- ✓ The 'Introduction to Regional Planning' and 'Introduction to Transportation' courses in the 2018-2020 curriculum are replaced by one of the available elective courses in the even semester of the 2020-2024 curriculum. The grade change will consider the best grade between the two courses in the 2018-2020 curriculum.

The change scheme can be seen in the diagram below

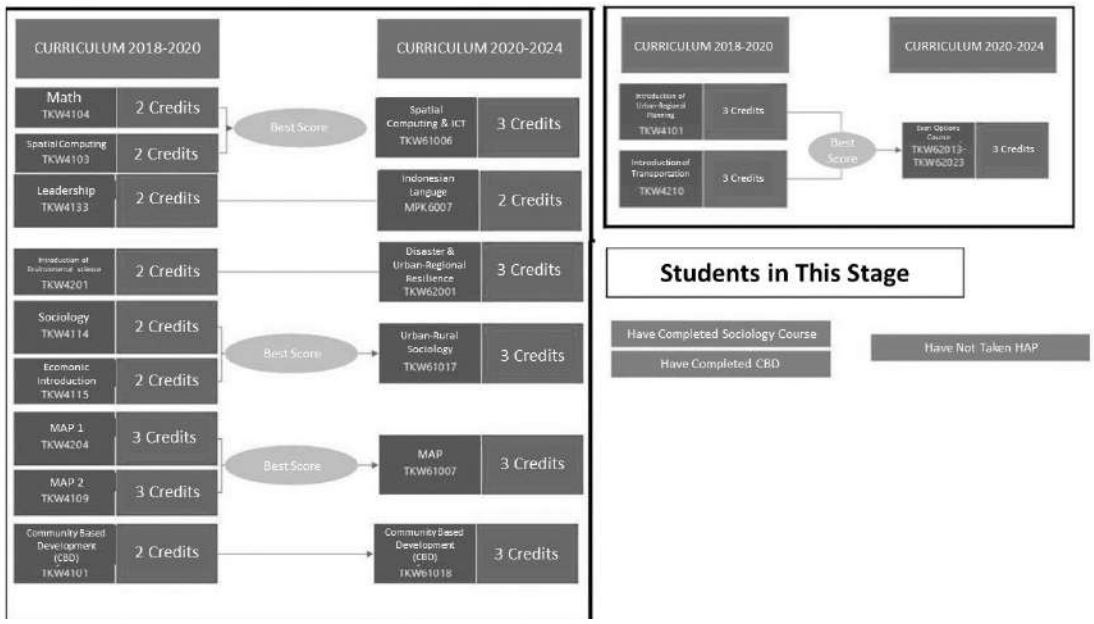


Figure 2. Inpassing Scheme and Course Load for Students Who Have Completed 92 Credits in the 2018-2020 Curriculum

c. For students who have competed 46 courses and 133 credits in the curriculum year of 2018-2020:

- ✓ The Spatial Computing and Information-Communication Engineering course in the 2020-2024 curriculum replaces the Mathematics and Spatial Computing course in the 2018-2020 curriculum. The grade adjustment considers the best grades between the two courses in the 2018-2020 curriculum.
- ✓ The Introduction to Environmental Science course in the 2018-2020 curriculum is replaced by the Regional-City Disaster and Resilience course in the 2020-2024 curriculum.
- ✓ The City-Village Sociology course in the 2020-2024 curriculum replaces the Sociology and Introduction to Economics courses in the 2018-2024 curriculum. The grade adjustment considers the best grades between the two courses in the 2018-2020 curriculum.
- ✓ The MAP 1 and MAP 2 courses in the 2018-2020 curriculum are replaced by the MAP course in the 2020-2024 curriculum. The grade adjustment considers the best grades between the two courses in the 2018-2020 curriculum.

- ✓ The Development Financing course in the 2018-2020 curriculum is replaced by one of the elective courses available in either the even or odd semester of the 2020-2024 curriculum. The replacement MKP course is based on the MKP group that the student has taken in the 2018-2020 curriculum.
- ✓ Changes in credit hours for the Community-Based Development course.
- ✓ The Leadership course is replaced by the Pancasila course, so students at this stage do not need to take the Pancasila course in the 2020/2024 curriculum.
- ✓ The Introduction to Transportation course in the 2018-2020 curriculum is replaced by the Village-City Integration course in the 2020-2024 curriculum.

The adjustment scheme can be seen in the diagram below.

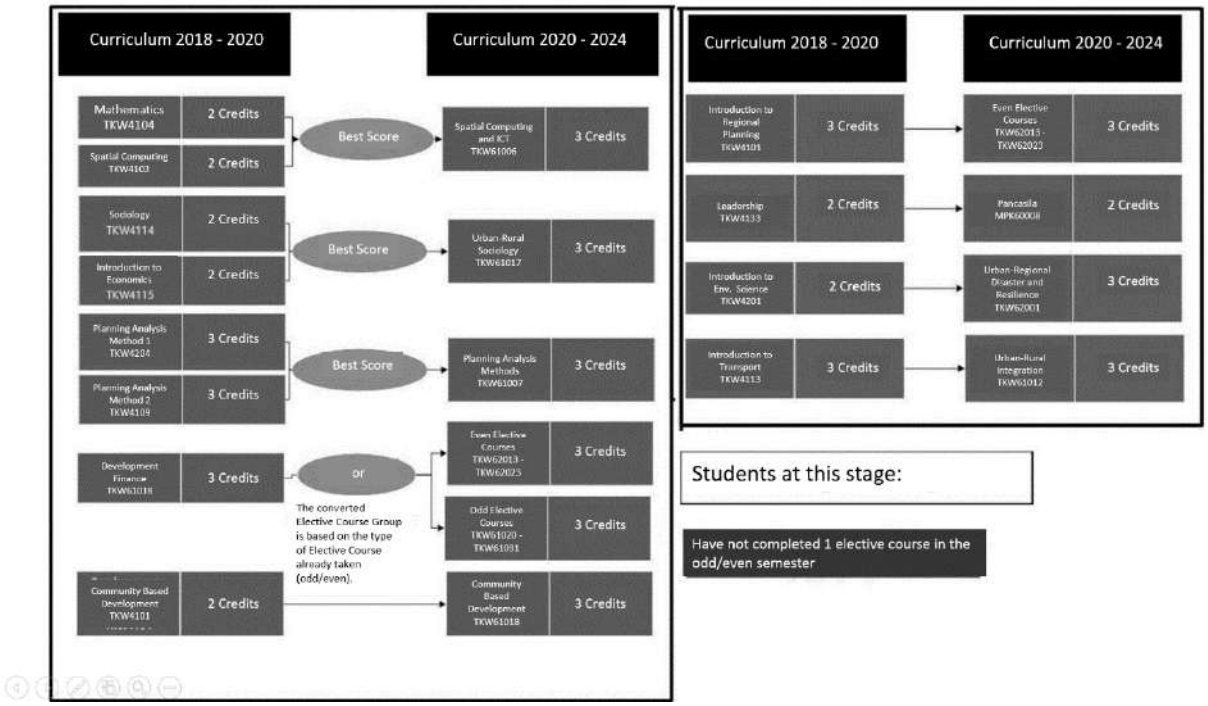


Diagram 3. *Inpassing* Scheme and Course Load for Students Who Have Completed 133 Credits in the 2018/2020 Curriculum

7. COURSE SYLLABI

Course: **RELIGION (ISLAM)**
Course Code: MPK60001
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand Islamic knowledge from the Quran and Hadith of

the Prophet for the study of creation, deeds, and Islam in the discipline of Urban and Regional Planning.
Topics: The universe and its contents, the nature of Allah's power, the Prophet and Islamic law, worship in Islam, Islam for academic disciplines, Islam and science, and Islam and community life.
References:

1. Gazalba, Sidi. *Pokok-pokok Ajaran Islam.*
2. Nasution, Harun. 1982. *Islam Ditinjau dari berbagai segi dan Aspeknya.* Jakarta: UI Press.
3. Syaltut, Mahmud Islam. *Aqidah dan Syariah*

Course: **RELIGION (CATHOLIC)**
Course Code: MPK60002
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand the concept of faith within the church, the life of the church, and society, with the aim of developing personal attitudes and mentalities to prove themselves useful for society as an expression of their faith.
Topics: The concept of a believing church, faith within the church, the church as a sacrament of salvation, the Holy Scriptures, and the mystery of the Trinity.
References:

1. Handowiyono.R.Sy. Membina Jemaat Beriman Jakarta Dokpen MAWI. Sidang MAWI 1976.
2. Meningkatkan Partisipasi dalam Hidup Kebudayaan,Kemasyarakatan dan Kenegaraan.(Spektrum No.4 tahun VII) Jakarta. Dokpen MAWI.
3. The Bible: Old and New Testament.

Course: **RELIGION (PROTESTANT)**
Course Code: MPK60003
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand knowledge about the background, concepts, and principles of Christianity.
Topics: Understanding Christianity, the basics of Christianity, sin and its consequences, the plan of salvation and its fulfillment in Jesus Christ, the role of the Holy Spirit, faith and knowledge, and faith and service.
References:

1. Lembaga Alkitab Indonesia, 1982, *Alkitab*
2. Harun, Hadiwijono, *Iman Kristen,* Jakarta BPK.

3. Sularso, Sopater, *Iman Kristen dan Ilmu Pengetahuan*.

Course: **RELIGION (HINDU)**
Course Code: MPK60004
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand and deeply internalize religious values, strengthening their faith and devotion to Sang Hyang Widi Wasa (Almighty God).
Topics: The history of Hinduism, the core teachings of Hinduism, the scope of Hinduism: Nawa Darsana, social institutions, the basics of Hindu leadership, and Hindu cultural arts.
References:

1. Dekker Nyoman dan I Ketut Sudiri P. *Pokok-Pokok Agama Hindu*.
2. Pudja Gede dan W. Sadia. 1979. *Rig Weda dan Samaweda*. Jakarta: Departemen Agama RI.

Course: **RELIGION (BUDDHIST)**
Course Code: MPK60005
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand, internalize, and practice the principle of the Divine One, Dharma, and devotion, thereby strengthening their faith (Soddha) and ensuring the continuity of the religion.
Topics: The nature of the Divine One, concepts of religious harmony, Bodhisattva, Sadparamita, Buddhist teachings, the law of emptiness, Paritta, meditation, devotion, and rituals.
References:

1. Proyek Pengadaan kitab suci Budha.Dharmapada.
2. Proyek Pengadaan kitab suci Budha. Syanghyang Kamahayanikan.

Course: **CIVIC EDUCATION**
Course Code: MPK60006
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand the concepts of archipelagic state, national perspective, national resilience, and regional autonomy, including knowledge of national politics and strategy.
Topics: The history of constitutional law as a foundation for city formation, national insight for city planners, the national perspective within Urban and Regional Planning, national identity through local wisdom, rights and responsibilities of citizens in urban and regional planning, the implementation of Pancasila in the planning process, national resilience, national politics and

strategy, regional autonomy, and good governance.
References:

1. Elly M. Setiardi. 2007. *Pendidikan Pancasila Untuk Perguruan Tinggi.* Penerbit : PT. Gramedia Pustaka Utama Jakarta.
2. Trianto dan Titik Triwulan Tutik. 2007. *Falsafah Negara dan Pendidikan Kewarganegaraan*.Penerbit : Prestasi Pustaka Publisher.
3. Sumarsono dkk. 2008. *Pendidikan Kewarganegaraan.* Penerbit : PT. Gramedia Pustaka Utama Jakarta.

Course: **BAHASA INDONESIA**
Course Code: MPK60007
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to write scientific reports accurately and correctly according to scientific writing standards.
Topics: Writing structure and format, research titles, abstracts/summaries, introductions, literature reviews, methodologies, special rules in scientific writing, rules for sentence and paragraph structure, punctuation use, citation methods, and compiling bibliographies.

References:

1. Chaer, Abdul. 1994. Linguistik Umum. Jakarta: Rineka Cipta.
2. Keraf, Gorys. 1989. Tata Bahasa Indonesia. NTT: Nusa Indah. 3. Kridalaksasna, Harimurti. 1993. Kamus Linguistik (Ed. Tiga).
3. Jakarta: Gramdia.
4. Samsuri. 1991. Analisis Bahasa. Jakarta: Erlangga.
5. Setiawan, D. O. 2001. Pedoman Penulisan Skripsi, Tesis, dan Disertasi. Bandung: Yrama Widya.
6. Surakhmad, Winarno. 1988. Paper, Tesis, Disertasi: Buku Pegangan. Bandung: Tarsito.
7. Suwigyono, Heri dan Santoso, Anang. 2008. Bahasa Indonesia Keilmuan. Malang: UMM Press.
8. Takdir , A. S. 1986. Tatabahasa Baru Bahasa Indonesia. Jakarta: Dian Rakyat.
9. Zaenal, Arifin, E dan Tassai, S. Amran. 1996. Cermat Berbahasa Indoensia. Jakarta: Akapress.

Course: **DEMOGRAPHY**
Course Code: TKW61001
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand population issues, population structure and

distribution, basic demographic measurements, population processes, population projections, employment, data evaluation, and population policies.
Topics: Introduction and demographic issues, population structure and distribution, population processes, aspects of population and employment, population projections, population data evaluation, and population policies.
References:

1. Bagoes Ida. 2000. General Demography. Pustaka Pelajar. Yogjakarta.
2. Barclay George W. 1983. Demographic Analysis Techniques. Translated by Rozy Munir & Budiarto. PT Bina Aksara. Jakarta.
3. Boque Donald J. Principles of Demography. John Wiley & Sons Inc. Publishing Institute FE UI. Jakarta.
4. Goldscheifer C. 1985. Population Modernization and Social Structure. (Translation). Rajawali. Jakarta.
5. FE UI Demographic Institute. 1981. Basics of Demography. Jakarta.
6. Lucas D. P. Mc. Donald E Young & Young. 1990. Introduction to Demography (Translation). Gajahmada University Press. Yogyakarta.
7. Weeks JR. 1981. Population: An Introduction to Concepts and Issues. Wardsworth Publishing Company. Belmont, California.

Course: **ENVIRONMENTAL RESOURCES ANALYSIS**
Course Code: TKW61002
Credits: 3 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand the context and substance of Environmental Resource Analysis, to understand environmental issues on a national and international scale, to understand environmental value systems, to understand the concept of the environment in Urban and Regional Planning, and to be able to apply and use methods and approaches in environmental analysis.
Topics: Introduction to ecology and the environment, environmental issues, environmental concepts, environmental value systems, environmental ecology in planning, climate change, adaptation and mitigation concepts, environmental capacity methods, environmental impact assessment, environmental risk assessment, and environmental valuation.
References:

1. Miller, G. Tyler. 2000. *Living in the Environment: Principles, Connections, and Solutions.* Pacific Grove, CA: Brooks-Cole Publishing Company.
2. Keraf, Sonny. 2006. *Etika Lingkungan.* Jakarta: Kompas.
3. Irwan, Zoer'aini Djamal. Tanpa tahun, *Prinsip-Prinsip Ekologi: Ekosistem, Lingkungan, dan Pelestariannya*
4. Noor, Djauhari. 2005. *Geologi Lingkungan.* Yogyakarta: Graha Ilmu.
5. Petts, J. 1999. Handbook of EIA Volume 1: Process, Methods and Potential. Oxford: Blackwell

Course: **PLANNING STATISTICS**
Course Code: TKW61003
Credits: 2 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to understand and apply basic statistical concepts within the scope of urban and regional planning.
Topics: Types and scales of variable measurement; calculating numerical data measures and determining the shape of data distribution; finding the probability of a value of a random variable (discrete and continuous); calculating interval estimates of one parameter and the difference between two parameters; testing one parameter and the difference between two parameters; calculating simple correlation between two variables; and creating simple linear regression equations.

References:

1. Moore, D.S. and McCabe, G.P., 1993. Introduction to The Practice of Statistics. 2nd ed. Freeman aand Company, New York.
2. Walpole and Mayer. 1978. Probability and Statistics for Scienctist and Engineers. McMillan, New York.
3. Yitnosumarto, S. 1994. Dasar-dasar Statistika. Cet ke dua. Raja Grafindo Persada. Jakarta.
4. Walpole. 1996. Pengantar Statistika. Gramedia Pustaka Utama.
5. Sembiring, RK. 1999. Pengantar Analisis Regresi. ITB, Bandung

COURSE: **INTRODUCTION TO URBAN AND REGIONAL PLANNING**
Course Code: TKW61004
Credits: 3 credits
Type: Compulsory
Prerequisite: None
Objective: To enable students to identify and explain the concepts and issues of Urban and Regional Planning in Indonesia, understand the scope and historical development of Urban and Regional Planning, recognize the origins and development of cities, understand and explain the essence of theory and methods in Urban and Regional Planning, and understand and explain the key elements and issues of planning, including land use, infrastructure, environment, transportation, housing, and other aspects related to Urban and Regional Planning.
Topics: The scope of Urban and Regional Planning, origins of cities, urban development, natural land use, regional structure, urban structure and function, introduction to transportation systems, infrastructure systems, environmental issues, housing, and urban management.

References:

1. Soegijoko, Soegianto. 1985. *Peta Perkembangan Perencanaan:Suatu Tantangan Bagi Pendidikan Planologi di Indonesia (Dalam: Bunga Rampai Perencanaan Pembangunan di Indonesia)*. Jakarta: Penerbit PT. Gramedia Widiasarana Indonesia.
2. Gallion, Arthur B. & Simon Eisner. 1994. *Pengantar Perencanaan Kota*. Jilid1. Jakarta: Erlangga.

3. Catanese, Anthony J. & James C. Snyder. 1992. *Perencanaan Kota*. Jakarta: Erlangga.
4. Suharso, Tunjung W.. 1996. *Kawasan Pusat Kota (Sejarah, Karakteristik, Tipologi dan Permasalahannya)*, Departemen PWK, Fakultas Teknik, Unibraw.
5. Soemarto C.D. 1986. *Hydrologi Teknik*. Surabaya: Penerbit Usaha Nasional.
6. Djoko S. 1986. *Teknik Sumber Daya Air I*. Jakarta: Erlangga.

COURSE: **URBAN AND REGIONAL INFRASTRUCTURE**
Course Code: TKW61005
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective:Students are able to explain and identify the potential and problems in a region through regional and urban infrastructure planning, analyze the state of urban regional infrastructure, and develop infrastructure planning and management concepts for regions and cities.
Main Topics:
Introduction to the basic concepts of infrastructure, waste management systems, clean water and sanitation systems, drainage and irrigation systems, energy and transportation systems within the field of urban and regional planning, each covering basic theory/concepts, analysis methods, and their economic and institutional aspects.

References:

1. F. Diaz Luis, George M. Savage, and Linda L. Eggerth Clarence G Golueke. 2003. *Solid Waste Management for Economically Developing Countries*. California: CalRecovery Inc.
2. Olov, Holmstrand, Jan-Erik-Meijer and Lotta Reztner. 1996. *Landfilling; The Location of Landfills.* Editor William Hoghland. Sweden: Lund University Press.
3. Mays, Larry W., Ph.D, P.E, P.H. 2002. *Urban Water Supply Handbook*. McGraw-Hil., United States of America
4. Kriteria Perencanaan KP01 – KP05. 1998. Departmen Pekerjaan Umum. Jakarta
5. Jan-Erik, Meijer. 1996. *Constraiction and Operation of Landfill Sites*. Sweden: Lund University Press.
6. Lennart, Persson Bo. 1996. *Landfill Gas.* Sweden: Lund University Press.
7. Kodoatie, Robert J., Ph.D. 2005. *Pengantar Manajemen Infrastruktur*. Yogyakarta: Pustaka Pelajar.
8. Kodoatie, Robert J., Ph.D. 2005. *Manajemen Rekayasa Infrastruktur*. Yogyakarta: Pustaka Pelajar.
9. SK SNI-13-1990-F: Pengelolaan Sampah
10. Soehardjono, DR. 1995. *Kebutuhan Air Tanaman.* Malang: ITN Press.
11. Lars, Tpnerby, William Hoghland and Marcia Marques Gomes.1997. *Waste Management and Recovery*. Sweden: Lund

COURSE: **SPATIAL COMPUTING & INFORMATIONA ND COMMUNICATION ENGINEERING**
Course Code: TKW61006
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective:
Students are able to understand the basics of presentations using moving images and sound, perform spatial-oriented presentations within a limited time, and understand and use basic mapping and modeling design applications as well as statistical software.
Main Topics:
Office programs, introduction to and use of multimedia applications, remote sensing, AutoCAD and SketchUp, and spatial analysis applications using ARC-GIS.
References:

1. Effendhy Asep. 2013. *Amazing Photo with Photoshop: Turning Ordinary Photos into Wow*. Mediakita.
2. Indarto. 2013. *Brief Tutorial on Arc-GIS 10*. Andi Publisher.
3. Nayak S. and Zlatanova S. 2008. *Remote Sensing and GIS Technologies for Monitoring and Prediction of Disasters*. Springer-Verlag Berlin Heidelberg.
4. Daniel Tan. 2009. *Google SketchUp for Site Design*. Springer.

COURSE: **PANCASILA**
Course Code: MPK60008
Credit Load: 2 credits
Type: Compulsory
Prerequisites: None
Objective: This course provides a fundamental understanding of the basic concepts of Pancasila as the state philosophy and everything related to the existence and realization of Pancasila values in societal, national, and state life in every aspect of development.
Main Topics: Constitutional history as the founder of cities, national insight for urban planners, national insight in urban and regional planning, national identity through local wisdom, the rights and obligations of citizens in urban and regional planning, the implementation of Pancasila in the planning process, national resilience, and good governance.
References:

1. Elly M. Setiardi. 2007. *Pancasila Education for Higher Education*. Jakarta: PT. Gramedia Pustaka Utama.
2. Indarto. 2013. *Tutorial Ringkas Arc-GIS 10.* Andi Publisher.
3. Nayak, S dan Zlatanova, S. 2008. *Remote Sensing and GIS Technologies for Monitoring and Prediction of Disasters.* Springer-Verlag Berlin Heidelbreg.
4. Daniel, Tan. 2009. *Google SketchUp for Site Design.* Springer

COURSE: **REGIONAL-CITY DISASTER AND RESILIENCE**
Course Code: TKW62001
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: This course provides a fundamental understanding of disaster risk and spatial planning, the historical context of disasters in Indonesia, understanding the role of spatial planning in disaster risk reduction, types of disasters in Indonesia, the concept of urban resilience, components and indicators of urban resilience, urban resilience in relation to disasters, resilience planning concepts and strategies, and using methods to analyze disasters.
Main Topics: Policies related to disaster risk reduction and spatial planning, disaster risk calculation, geoinformation technology in major disasters, types of disasters in Indonesia, climate change and its impacts, the concept of urban resilience, components and indicators of urban resilience, resilience assessment, developing resilience concepts, disaster adaptation, and mitigation.
References:

1. Vale, Lawrence J. And Thomas J. Campanella (editors). 2005. The Resilient City: How Modern Cities Recover from Disaster.
2. Grazia Brunetta, Ombretta Caldarice, Nicola Tollin, Marti Rosas-Casals, Jordi Morató. 2019. Urban Resilience for Risk and Adaptation Governance [1st ed.]. Springer International Publishing.
3. Lance Jay Brown, David Dixon. 2014. Urban Design for an Urban Century Shaping More Livable, Equitable, and Resilient Cities, 2d edition. Wiley. New Jersey.
4. Urban Land Insititute. 2015. Building the Resilient City. A ULI Conference Report. ULI. Washington DC.
5. Alfred Olfert, Stefan Greifing and Maria J. Batista (2006). Regional multy-risk review, hazards weighting, and spatial planning response to risk results from European case studies, Natural Affecting the Spatial Development of European Regions, Page 125-151.
6. Bishop Ian D., Rabifard A., and Sutanta Heri (2009). An Integrating Approach for Disaster Risk Reduction using Spatial Planning and SDI Platform, Proceedings of the Surveying & Spatial Sciences Institute Biennial International Conference, Adelaide 2009, Surveying & Spatial Sciences Institute, pp. 341351.

COURSE: **LAND USE AND LAND UTILIZATION**
Course Code: TKW62002
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are able to understand the basic framework of land use and development analysis, analyze aspects of urban land policy, and analyze aspects of land management.
Main Topics: Global issues in urban development, land use change management concepts, urban land provision, basic land use theories, land use and land value, land provision for low-income housing in third-world cities, land use planning programs, urban land development and policy

acquisition, land information systems, operational aspects of urban land management, land use potential, and types of land acquisition.

References:

1. Arendt, Randall.1994. *Rural by Design.; Maintaning Smal Character*. Chicago, Illionis: Planners Press.
2. Dewberry & Davis. 1996. *Land Development Handbook: Planning, Engineering, and Surveying*. McGraw Hill 3.
3. Chapin, F.Stuart. Urban Planning. Chicago: University of Illinois.
4. Yunus, Hadi Sabari. 2004. *Struktur Tata Ruang Kota.* Yogyakarta: Pustaka Pelajar.
5. Jayadinata, Johara T. 1999. *Tata Guna Tanah Dalam Perencanaan Pedesaan Perkotaan & Wilayah Edisi Ketiga*. Bandung: ITB.
6. Karyoedi**,** Mochtarram. *Manajemen Lahan Perkotaan*. Municipal Finance Project, DEPKU, USAID
7. Sarre, Philip. 1997. *Section II Spatial Analysis Point Patterns Unit 9-12***.**Rustington Sussex: The Open University Press.
8. Aspinall, Richard J. and Michael J. Hill. 2008.*Land Use Change Science, Policy and Management.* Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300Boca Raton, FL 33487-2742
9. Lambin, Eric F. And Helmut Geist. 2006**.** *Land-Use and LandCover Change*.Berlin Heidelberg: Springer-Verlag.
10. Kivell, Philip.1993. *Land and The City*. London: Routledge.
11. Undang-undang No.5 Tahun 1960 tentang Keagrariaan.
12. Undang-undang No. 26 Tahun 2007 tentang Penataan Ruang.

COURSE: **INTEGRATED VILLAGE PLANNING**

Course Code: TKW62003

Credits: 3

Type: Compulsory

Prerequisites: None

Objective: In this course, students are introduced to and explained the process of village planning, including community development and physical rural planning, components of physical and non-physical rural systems, sustainable rural environmental planning, sectoral planning for rural development, and the implementation of village development programs in Indonesia.

Topics: Introduction to integrated village planning, issues in village planning, components of physical and non-physical rural systems, sustainable rural planning systems, components of rural planning, sectoral rural development planning, implementation of rural development programs in Indonesia, farming business calculations, and the development of rural-urban interactions.

References:

1. Direktorat Jenderal Cipta Karya, Standar Perencanaan Pedesaan

2. Cloke, Paul, dkk. 2006. *Handbook of Rural Studies*. London: Sage Pub.
3. Prayitno, Gunawan. 2009. *Perencanaan Desa Terpadu*. Malang: UB Press
4. Perform Project. 2003. *Modul Forum Konsultasi Kecamatan (UDKP), Program Dasar Pembangunan Partisipatif.*
5. Soekartawi, dkk. 1986. *Ilmu Usaha Tani.* Jakarta: UI Press 6. United Nations. 1979. *Guidelines for Rural Centre Planning*. New York.

COURSE: **URBAN SETTLEMENT PLANNING STUDIO**
Course Code: TKW62004
Credits: 5
Type: Compulsory
Prerequisites: Introduction to Urban and regional planning
Objective: Students will be able to explain theories and measurement tools (formulas) used in urban settlement planning, identify the characteristics of a settlement environment and its problems, analyze or calculate population projections, the needs for urban settlement development and its infrastructure, as well as plan the allocation of settlement needs and zoning for infrastructure facilities and programs/projects for infrastructure development.
Topics: Introduction to and concepts of settlement studio, methods of population survey and mapping, guidelines or standards for urban settlement infrastructure, basic calculations for urban settlement infrastructure, disaster management at the settlement scale, settlement planning products, and the preparation of settlement area plans

References:

1. Abrams, Charles. 1969. *Housing in The Modern World*. Faber & Faber
2. Correa, Charles. 1989. *The New Landcape; Urban in the Third World*. UK: Butterworth Architecture.
3. Doxiadis, Constantinos A. 1969. *Ekistics; Introductions to the Science of Human Settlements*. London: Hutchinson.
4. Direktorat Jenderal Permukiman. 1986. *Standar Permukiman Perkotaan*. Bandung: DPMB Bandung.
5. Gilbert, A and Gugler, J. 1987. *Cities, Poverty and Development.* London: Elbs.
6. Levi, Y. and Litwin, H. 1986.*Community and Cooperatives in Participatory Development*. Brookfield: Gower.
7. Angel, Slomo & Archer. 1983.*Land for Housing The Poor*. Select Broads
8. Turner, John F.C. 1976.*Housing by People; Towards Autonomy in Building Environments*. London: Marion Boyars.

COURSE: LOCATION AND SPATIAL PATTERN ANALYSIS
Course Code: TKW62005
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand several concepts and methods of location theory,

be able to apply these concepts, and use various location analysis methods in spatial planning analysis.
Main Topics: Location theory, determining location in the context of external organization, factors determining production, spatial analysis of rural land use, central place analysis, urban land use patterns & processes, bid-rent theory & urban land use, residential land use & social patterns in cities, industrial location, location dependency & spatial equilibrium, transportation as an input.

References:

1. Municipal Finance Project, Departemen Keuangan- USAID
2. Janis D. Berstein, 1994, "Land Use Considerations in Urban Environmental Management", the World Bank, Washington, D.C.
3. Edward J. Kaiser, David R. Godschalk, F.Stuart Chapin, Jr., 1995,"Urban Land Use Planning" Fourt Edition, University of Illinois Press, Urbana and Chicago.
4. Djoko Sujarto,"Pengembangan Lahan", Departemen Teknik Planologi, FTSP, ITB
5. John Glasson, Riki Therivel, Andrew Chadwick,"Introduction to Environmental Impact Asseement",2nd Edition, 2002, Spon Press, London
6. ————————, 2002,"Case Studies", Urban Land Management Programme, Royal Institute of Technology, Stockholm, Sweden.
7. Patrick McAuslan,1986, "Tanah Perkotaan dan Perlindungan Rakyat Jelata", PT. Gramedia, Jakarta
8. Goran Tannerfeldt, 1995," Towards and Urban World: Urbanization and Development Assistance ", SIDA, Stockholm
9. ————————, 1992,"Studi Penyiapan Materi Strategi Nasional Pengembangan Perumahan Jangka Panjang" Lembaga Penelitian, ITB.
10. ————————, 2000-2001, "Land and Real Estate Management" Master's Programe on Urban Management, IHS

COURSE: PLANNING THEORY
Course Code: TKW62006
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand the paradigm and syntagma of planning, as well as recognize approaches to urban and regional planning, planning as a process, and the practice of planning. Students will gain an understanding of the concepts, functions, and position of planning, understand various planning paradigms from the past, present, and future, recognize approaches to urban and regional planning, planning as a process and theory in planning, and be able to evaluate planning cases in the field of urban and regional planning; both spatial and sectoral.
Main Topics: Concepts and position of planning, mediation functions of planning, types of planning, planning paradigms: theocentricism, utopia, positivism, rationalism, phenomenology, future paradigms and theory trends, development of planning practices in Indonesia: development of planning practices during the kingdom period, VOC, Dutch colonialism, the war of independence, parliamentary democracy, guided democracy and economy, the New Order and

reform, planning syntagma: epistemic cycle, pragmatic cycle, planning cycle, planning methodology, planning control.

References:

1. Barry, Brian W., Strategic Planning Workbook. 1997. Wilder Foundation. Minnesota
2. Blowers, Hamnet, Sarre (ed). The Future of Cities. Hutchinson Educational, 1974
3. Branch, Melville C., Comprehensive Planning for The 21st Century: General Theory and Principles. 1998. Praeger. London
4. Branch, Melville C., Perencanaan Kota Komprehensif. 1995. Gadjahmada University Press. Jogjakarta
5. Faludi, Andreas. A Reader in Planning Theory. Pergamon Press, 1973
6. Heidemann, Claus. Planning Theory. Institute for Regional Planning/Science, University of Karlsruhe, 1992
7. John Friedmann, 1987. Planning in The Public Domain: From Knowledge to Action. Princeton Uiniversity Press
8. Leonard Goodstein, Timothy Nolan, William Pfeiffer. 1993. Applied Strategic Planning: A Comprehensive Guide. McGraw-Hill Inc.
9. Scott Campbell & Susan Fainstein. 2005. Readings in Planning Theory,. Blackwell Publishing.

COURSE: ENGLISH/FOREIGN LANGUAGE PROFICIENCY
Course Code: UBU60004
Credit Load: 2 credits
Type: Compulsory
Prerequisites: None
Objective: To enable students to use English to support their learning activities, understand, narrate, and write literature in English, demonstrate the ability to write and present simple written work (essays) in English.
Main Topics: Speaking, structure, reading, listening, and writing in English.
References:

1. Riley, Pamela. 1980. Academic Orientation Course. AAUCS.
2. The British Council. 1982. Reading and Thinking in English. Oxford University Press. London.

COURSE: PLANNING ANALYSIS METHODS
Course Code: TKW61007
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand the concepts and theories related to methods and analysis in urban and regional planning, including semi-experimental methods, descriptive methods, comparative methods, and qualitative methods.
Main Topics: Scientific research, introduction-method-techniques in semi-experimental research, comparative methods, techniques in comparative research (regression analysis, qualitative statistics), application of comparative methods, descriptive methods in urban and regional planning research, descriptive analysis techniques (QFD, factor analysis), application of descriptive methods, as well as qualitative methods and their applications.
References:

1. Burhan Bungin. Penelitian Kualitatif untuk Komunikasi, Kebijakan Publik dan Ilmu Sosial lainnya. Fajar Interpratama Grafika. Jakarta. 2007.
2. Berry, Ralph. The Research Project: How to Write It. Routledge. 2005.
3. Dane, Francis C. Research Methods, Mercer University. California. 1990.
4. Erianto. Metodologi Polling Memberdayakan Suara Rakyat. Remaja Rosdakarya. Bandung. 1999.
5. Fred. N. Keringer. Asas-Asas Penelitian Behavioral. Gajah Mada University Press. 2004.
6. Guest et al. 2012. Applied Thematic Analysis. Sage Publications.
7. Neuman, Lawrence. Social Research Methods, Qualitative and Quantitative Approaches. Allyn and Bacon. Boston. 2003
8. Norman K.D. and Yvonna S. L. Handbook of Qualitative Research. Sage Publication. Pvt. Ltd. India 1997.
9. O'Leary, Zina. The Essential Guide to Doing Research. Sage Publications. 2004.
10. Ritchie and Lewis. 2003. Qualitative Research Practice. Sage Publications.
11. Robert K. Yin. Studi Kasus Desain dan Metode. Raja Drafindo Persada. Jakarta. 2008.
12. Saris, Willem. Design, Evaluation, and Analysis of Questionnaires for Survey Research. Wiley-Interscience. 2007.

COURSE: REGIONAL AND CITY ECONOMICS
Course Code: TKW61008
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand aspects related to regional and urban economics, such as urbanization, settlements, land use, and so on; to understand and explain economic growth theories for regions and cities and related policies; and to apply methods used in regional and urban economic analysis.
Main Topics: Introduction to regional and urban economics, big and small cities, regional framework and regional income, regional economic growth theory, analysis of regional economic potential, urbanization and urban finance, land use and land value, location theory, regional and urban economic growth, and urban and regional economic policies.
References:
1. O'sullivan. 2003. Urban Economics. McGraw-Hill
2. Isard, Wolter. 1977. Analysis Economic Regional.
3. Safrizal. 2008. Ekonomi Regional: Teori dan Aplikasi. Padang: Baduose Media.
4. Tarigan, Robinson. 2006. Perencanaan Pembangunan Wilayah. Jakarta: Bumi Aksara.
5. Ekonomi Regional, 2005, Robinson Tarigan
6. Ekonomi Regional, 2005, Rusli Galib

COURSE: CITY PLANNING
Course Code: TKW61009
Credit Load: 3 credits
Type: Compulsory

Prerequisites: None
Objective: Students are expected to understand, explain, and identify concepts and issues in urban planning in Indonesia, including the structure, pattern, and depth of urban planning, the procedures/processes of urban planning in accordance with structure and function, urban planning strategies, and to provide analysis/critique of urban planning issues along with the formulation of guidelines/plans.
Main Topics: Urban systems and functions, sustainable urban development planning and design, urban infrastructure, urban spatial structure and patterns, and environment-based urban planning concepts.
References:

1. Anthony J dan J. Snyder. 1992. Perencanaan Kota. Erlangga. Jakarta.
2. Cullen, G. 1979. *The Concise Townscape*. New York:VNR Company Inc.
3. Drakakis-Smith, D. 2000. *Third World Cities*. Routledge. London.
4. Goodstein, L et.al. 1993. *Applied Strategic Planning: A Comprehensive Guide*. Mc. Graw-Hill. Inc.
5. Hazel, G and R Parry. 2004. *Making Cities Work*. WilleyAcademy. London
6. McGranahan, G et.al. 2001. *Citizen at Risk*. Earthscan. London.
7. Moldan, B and S Billharz. 1997. *Sustainability Indicators*. Wiley.
8. Oppenheim, N. 1980. *Applied Models in Urban and Regional Planning*. Prentice Hall Inc. New Jersey
9. Patton and Sawicki. 1986. *Basic Methods of Planning Analisis and Planning*. Prentice Hall. New Jersey.
10. Warpani, S. 1985. Analisis Kota dan Daerah. Penerbit ITB. Bandung.

COURSE: VILLAGE PLANNING STUDIO
Course Code: TKW61010
Credit Load: 5 credits
Type: Compulsory
Prerequisites: Integrated Village Planning
Objective: Students are expected to apply village planning theories and methods to real-world case studies, conduct field surveys, identify actual problems in the field, perform spatial planning at the village level with a community-oriented and participatory approach, and work independently and as a team in the planning process.
Main Topics: Methods of participatory data collection, techniques and tools for assessing social, economic, and institutional characteristics, techniques and tools for assessing physical, ecological, and village development, analytical techniques for rural areas (photo mapping, village transect, village history, participatory methods, farming practices, root cause analysis, goal root analysis, SWOT, IFAS-EFAS, etc.), preparation of rural spatial programs and plans, and project impact assessment.
References:

1. Modul Studio Perencanaan Desa. Departemen Perencanaan Wilayah dan Kota. Fakultas Teknik. Universitas Brawijaya.
2. Direktorat Jenderal Cipta Karya. Standar Perencanaan Pedesaan.
3. Cloke, Paul, dkk. 2006. *Handbook of Rural Studies*, London: Sage Publication.

4. Prayitno, Gunawan. 2009. *Perencanaan Desa Terpadu*. UB Press.
5. Soekartawi, dkk. 1986. *Ilmu Usaha Tani.* UI Press.
6. United Nations. 1979. *Guidelines for Rural Centre Planning*. New York.

COURSE: PLANNING ADMINISTRATION LAW
Course Code: TKW61011
Credit Load: 2 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to thoroughly understand the concepts, principles, and theories related to land use and spatial planning law, covering planning, utilization, and control of space utilization. Students should also be able to understand and analyze concrete legal issues (conflicts and solutions) in accordance with the levels of spatial planning, including the permitting process.
Main Topics: Basic concepts and understanding of the legal system in Indonesia and regulations on spatial planning, integration of planning systems, spatial management, concepts and principles of land use in space utilization, subjects and objects of land use, land use control and utilization, transparency and accountability in the assessment of misuse, practice of spatial law enforcement, dispute resolution, the rights and obligations of the community in spatial planning, and accountability assurance.
References:
1. Djunaedi, A. 2010. *Proses Perencanaan Wilayah dan Kota*. Yogyakarta
2. Ramadona, Aditya L. 2011. *Membangun Kembali Kota Secara Berkelanjutan, Mempersiapkan Masa Depan Dengan Lebih Baik, Cetakan Pertama*. Yogyakarta: Pusat Studi Lingkungan Hidup UGM dan Fakultas Ekonomika dan Bisnis UGM, Yogyakarta;
3. Supriyatno, Budi. 2009. *Manajemen Tata Ruang.* Cetakan Kedua. Tangerang: CV. Media Brilian.
4. Derek Hall dkk. 2011. *Powers of Exclusion, Land Dilemmas in Southeast Asia, First Edition. Singapore:* NUS Press.
5. Hasni. 2008. *Hukum Penataan Ruang dan Penatagunaan Tanah, Dalam Konteks UUPA, UUPR dan UUPLH, Cetakan Pertama*. Jakarta: PT Rajagrafindo Persada
6. Asshidiqie, Jimly. 2009. *Green Constitution, Nuansa Hijau Undang-undang Dasar Negara Republik Indonesia Tahun 1945, Cetakan Pertama*. Jakarta: PT.Rajagrafindo Persada.
7. Sumardjono, Maria SW, dkk. 2011. *Pengaturan Sumber Daya Alam di Indonesia, Antara Yang Tersurat dan Tersirat, Kajian Kritis Undang-undang Terkait Penataan Ruang dan Sumber Daya Alam, Cetakan Pertama.* Yogyakarta: Fakultas Hukum UGM dan Gadjah Mada University Press, Yogyakarta
8. Muchsin dan Imam Koeswahyono. 2008. *Aspek Kebijaksanaan, Hukum Penatagunaan Tanah dan Penataan Ruang, Cetakan Pertama*. Jakarta: PT Sinar Grafika.
9. Koeswahyono.Imam. 2012. *Hukum Penatagunaan Tanah dan Penataan Ruang (Problematika Antara Teks dan Konteks)*. Malang: Universitas Brawijaya Press (UB-Press)
10. Forester, J. 1948. *Planning in the Face of Power*. California: University of California Press.

COURSE: FIELD WORK (KKL)
Course Code: TKW60001
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to learn and understand sustainable planning practices in developed/developing countries and be able to adopt them in formulating strategies for regional and urban development planning.
Main Topics: Issues of urban and regional development, theories of urban and regional development planning, case studies of urban and regional development planning in developed countries, concepts of sustainable urban and regional development in developed countries, as well as training or enhancement of foreign language skills and introduction to the social behaviors of people in other countries.
References:

1. Urban housing policy, William G, Grigsby. Routledge. 2017.
2. Holden, Debra J. And Marc A. Zimmerman (editors). 2009. A Practical Guide to Program Evaluation Planning. London: Sage Publication.
3. Sida, Integrating the Environment, June 2004, Knowledge for Environmentally Sustainable development, Sida at Work
4. Cloke, Paul, dkk. 2006. Handbook of Rural Studies. London: Sage Pub.

COURSE: ENVIRONMENTAL EVALUATION
Course Code: TKW62007
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand the concepts and foundational policies for preparing Environmental Impact Assessment (AMDAL) documents, impact scoping methods, Environmental Component Analysis (MPAD), impact prediction methods, impact evaluation methods, and methods for preparing environmental management and monitoring plans.
Main Topics: Review of environmental management policy aspects in Indonesia, both national and regional; The role of environmental management and project management in Indonesia; The concept of analyzing the impact of development activities on various environmental components; Procedures and scope of environmental evaluation of a development project, as well as various environmental evaluation methods and techniques.
References:

1. Surna Tjahja Djajaningrat, 2001, Pemikiran, tantangan dan Permasalahan Lingkungan, Studio Tekno Ekonomi ITB-bandung
2. Oto Sumarwoto, 1991, Analisis Dampak Lingkungan, Gadjah Mada University Press,
3. Chafid Fandeli, 1992, Analisis Mengenai Dampak Lingkungan: Prinsip dasar dan Pemapanannya dalam Pembangunan, Liberty Press
4. Gunawan Suratmo, 1992, Analisis Mengenai Dampak Lingkungan, Gadjah Mada University Press
5. Permen KLH No. 16 Tahun 2012 tentang Pedoman Penyusunan AMDAL
6. Permen KLH No. 5 Tahun 2012 tentang Kegiatan Wajib AMDAL
7. M. Suparmoko & Maria R. Suparmoko, 2000, Ekonomi Lingkungan, BPFE Yogyakarta
8. M. Suparmoko & Maria R. Suparmoko, 2000, Ekonomi Lingkungan, BPFE Yogyakarta

9. Surna Tjahja Djajaningrat, 2001, Pemikiran, tantangan dan Permasalahan Lingkungan, Studio Tekno Ekonomi ITB-bandung
10. Sida, Sustainable Development?, 2002, Guidelines for The review of EIA, Sida at Work,
11. Sida, Integrating the Environment, June 2004, Knowledge for Environmentally Sustainable development, Sida at Work
12. Dr. ir. Dede Setiadi, 2000, Kumpulan Peraturan, Perundangan Lingkungan Hidup, Ditjen Dikti Depdiknas
13. J. Petts, 1999, Handbook of EIA Volume 1: Process, methods and Potential, Blackwell, Oxford
14. J. Glasson, Therival R., & A. Chaderick, 1999, Introduction to EIA 2nd Edition, Spon, London
15. Arts J & Noteboom S, 2000, EIS Monitoring & Auditing, Earth Scan, London
16. KepMen LH No. 54 Tahun 1995 Tentang Amdal Terpadu/Multi Sektor dan Regional.

COURSE: SITE PLANNING
Course Code: TKW62008
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand the principles, procedures, and applications of site planning, develop theories on site case studies, and comprehend and implement the site planning process, site investigation and analysis, analytical drawings, and conceptual drawings. Additionally, students should consider environmental factors in site planning, understand factors that influence orientation and layout, and produce technical drawings for area development.
Main Topics: Site graphics, site investigation, applied site investigation, site analysis, site engineering, applied analysis (decomposition analysis, visual impact analysis), sustainable site design and development, area development scenarios, and conceptual site planning.
References:
1. De Chiara, Joseph. 1978. *Standard Perencanaan Tapak / Site Planning Standards*. New York: Mc Graw Hill Press.
2. Chapin, F.S. 1985. *Urban Lands Use Planning*. California: University of Illinois Press.
3. Lynch, Kevin. 1984. *Site Planning*. Massachusetts : MIT Press Cambridge.
4. Androvich, GD & Riposa. G. 1993. *Doing Urban research; Applied Social Research Method Series*. California: Sage Publications.
5. SEPA. 2009. *Riparian Vegetation Management*. Scottish Environment Protection Agency.
6. WSUD. 2010. *Multi Uses of Open Spaces Discussion Paper*. Queensland: Healthy Water Ways.

COURSE: URBAN DESIGN
Course Code: TKW62009
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to explain the development and history of urban design in general; understand the elements, studies, and scope of urban design; and analyze the elements and urban spaces from visual, aesthetic, perceptual, morphological, social, functional, and temporal aspects. Additionally, students should understand the processes, methods, and analysis

in urban design, formulate strategies, and produce urban design outcomes. This course also prepares students for the Urban Design Studio.
Main Topics: Basic concepts and context of urban design, dimensions of study and elements of urban design, techniques for presenting data and methods for analyzing urban design elements, development of urban design concepts, and insights into urban design products
References:

1. Alexander, C. 1987. A New Theory of Urban Design. Oxford: Oxford University Press.
2. Barnet, J. 1974. Urban Design as Public Policy. AR Books.
3. Bentley, Ian et.al. 1985. Responsive Environments: A Manual for Designers.
4. Broadbent, G. 1990. Emerging Concepts in Urban Design. London: VNR International.
5. Camona, M.et.al.2003.Public Places, Urban Spaces:The Dimensions of Urban design.Oxford: Architectural Press.
6. Francis DK. Ching,1979. Form Space and Order. John Wiley & Sons.
7. Ashihara, Yoshinobu, 1970. Exterior Design in Architecture. Van Nostrand Reinhold
8. Jan Gehl, Life Between Building. 1971. The Danish Architectural Press
9. Lynch, Kevin. 1969. Image of the City. The MIT Press
10. 10.Shirvani, Hamid. 1985. Urban Design Process. John Wiley & Sons

COURSE: URBAN PLANNING STUDIO
Course Code: TKW62010
Credit Load: 5 credits
Type: Compulsory
Prerequisites: Urban Planning
Objective: Students are expected to identify various potentials and issues in urban planning, analyze problems according to urban planning analysis methods, develop urban planning concepts, and formulate objectives, strategies, and plans or directives for urban spatial planning.
Main Topics: Introduction to urban planning studio, content and analysis of Detailed Spatial Plan (RDTR), zoning regulation, concepts of urban area division, formulation of urban spatial planning objectives, spatial patterns, infrastructure networks, and public service facilities, determination of prioritized sub-urban areas, and spatial utilization provisions.
References:

1. Anthony J dan J. Snyder. 1992. *Perencanaan Kota.* Jakarta: Erlangga.
2. Cullen, G. 1979. *The Concise Townscape*. New York:VNR Company Inc.
3. Drakakis-Smith, D. 2000. *Third World Cities*. London: Routledge.
4. Goodstein, L et.al. 1993. *Applied Strategic Planning*: *A Comprehensive Guide*. Mc. Graw-Hill. Inc.
5. Hazel, G and R Parry. 2004. *Making Cities Work*. London: Willey- Academy.
6. McGranahan, G et.al. 2001. *Citizen at Risk*. London: Earthscan.
7. Moldan, B and S Billharz. 1997. *Sustainability Indicators*. Wiley.
8. Oppenheim, N. 1980. *Applied Models in Urban and Regional Planning*. New Jersey: Prentice Hall Inc.
9. Patton and Sawicki. 1986. *Basic Methods of Planning Analisis and Planning*. New Jersey: Prentice Hall.
10. Warpani, S. 1985. *Analisis Kota dan Daerah*. Bandung: Penerbit ITB.

11. Permen Pekerjaan Umum Nomor 20 Tahun 2011 tentang Pedoman Penyusunan RDTR.

COURSE: TRANSPORTATION PLANNING
Course Code: TKW62011
Credit Load: 3 credits
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand theoretical/philosophical knowledge, analyze fundamental issues in transportation planning, and develop transportation planning concepts.
Main Topics: Transportation and Land Use, Traffic Performance (Roads and Intersections), Survey Methods, Mode Planning, Urban Spatial Structure and Transportation, Transportation Economics, Four Step Model, Parking Performance, Parking Design and Road Complements, Traffic Management, HUB – SPOKE – GATEWAY, Terminal – Station – Airport Planning, Transportation Issues in Developing Countries.
References:

1. Fidel Miro. 2002. Perencanaan Transportasi. Erlangga, Jakarta.
2. Faulks. 1982. Principles of Transport, Ian Allan.
3. Sakti Adji Adisasmita. 2011. Transportasi dan Pengembangan Wilayah. Graha Ilmu, Yogyakarta.
4. Sakti Adji Adisasmita. 2012. Perencanaan Infrastruktur Transportasi Wilayah. Graha Ilmu, Yogyakarta.
5. Schumer. Element of Transport, Ian allan.
6. Transport Planning Hand Book. 1992, Institut of Transport engineering.PTR Prentice Hall inc. Asimon & Schuster Company Englewood Cliffs.New Jersey.
7. Tamin Ofyar.2000. Perencanaan dan permodelan transportasi. ITB. Bandung
8. Mc. Graw-Hill. Handbook of Transportation Engineering.
9. Khisty dan Lall. 2000. Rekayasa Transportasi

Course: PLANNING INFORMATION SYSTEMS
Course Code: TKW62012
Credits: 3
Type: Compulsory
Prerequisites: None
Objective: Students are expected to master software applications in the field of urban and regional planning, be able to use geospatial-oriented image delivery applications, perform analysis using GIS-based software, and utilize these tools as a basis for decision-making related to spatial planning.
Main Topics: Concepts and fundamentals of GIS, geodata, dynamic modeling, satellite imagery, ILWIS, classification, spatial multi-criteria analysis, model builder, measurable delineation, network analysis, and disaster management.
References:

1. Indarto (2013), Tutorial Ringkas Arcgis 10, Andi Publisher

2. Prahasta, Eddy. 2011. Tutorial Arc-GIS Dekstop untuk Bidang Geodesi & Geomatika. Bandung: Informatika.
3. Estoque, Ronald C. 2011. GIS based Multi Criteria Decision Analysis. Divisions of Spatial Information Science. University of Tsukuba
4. Prahasta, Edi. 2000. Sistem Informasi Geografis Tools and Plugins. Bandung: Informatika.
5. P.A Burrough, Principles of GIS for Land Resources Assessment, Oxford, 1990.
6. Kendall, Information System; Concepts and Methodology, 1986.
7. James B. Campbel, Introduction to Remote Sensing, The Guilford Press, 1987.
8. Mark Monmanier, Mapping it Out, The University of Chicago Press, 1993.
9. Mark Monmanier, How to Lie with Map, The University of Chicago Press, 1991.
10. Nicholas Chrisman, Geographic Information System, Joh Willey and Sons, 1997.
11. United Nation, Threshold Analysis Handbook, Department of Economic and Social Affairs, 1977

Course: COMMUNITY SERVICE
Course Code: UBU60005
Credits: 4
Type: Elective
Prerequisites: None
Objective: Students are expected to understand and carry out community service activities directly. The community service activities are intended to apply knowledge while helping the community solve problems in the village environment.
Main Topics: Concepts of Community Service implementation, types of Community Service activities, implementation procedures, reporting, and monitoring and evaluation of Community Service activities.
References: (Adjusted according to the topic or activity of the Community Service).

Course: RURAL-URBAN INTEGRATION
Course Code: TKW61012
Credits: 3
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand and provide a general explanation about the identification, impacts, collaboration patterns, concepts, and strategies in rural-urban integration.
Main Topics: Identification and relationships between rural and urban areas, identification of rural-urban areas and their borders, rural-urban relationships within the transportation system, rural-urban relationships within the communication system, growth models, break-even methods as a link between rural and urban areas, economic aspects as an impact of rural-urban integration, social aspects as an impact of rural-urban integration, infrastructure provision aspects, regulations and legislation regarding rural-urban integration, rural-urban cooperation patterns, and concepts and strategies for rural-urban integration.
References:
1. Arthur B. Gallion & Simon Eisner. 1994. Pengantar Perencanaan Kota. Jilid1. Penerbit Erlangga, Jakarta

2. Anthony J. Catanese & James C. Snyder. 1992. Perencanaan Kota. Penerbit Erlangga, Jakarta. Cecilia Tacoli, Environment and Urbanization, Vol. 10, No. 1, April 1998
3. Goran & Salivsjacka, Some Aspects of Rural and Urban Interdepence: Economic-Geographcal View, RJOAS, 1(61), January 2017. DOI https://doi.org/10.18551/rjoas.2017-01.03
4. Florian Steinberg, Rural–Urban Linkages: An Urban Perspective. Document No. 128. Working Group: Development with Territorial Cohesion. Oktober 2014.
5. Vincent L. Rotagé, Rural-Urban Integration in Java, Routledge, London, 23 May 2019
6. OECD(2013), Rural-Urban Partnerships: An Integrated Approach to Economic Development, OECD Publishing. http:/ /dx.doi.org/10.1787/9789264204812-en.
7. An Integrated Approach to Rural Development https:// www.un.org/en/ecosoc/docs/pdfs/an_integrated_ approach_ to_ rural_development.pdf.

Course: COMPREHENSIVE RESEARCH METHODOLOGY
Course Code: TKW61013
Credits: 3
Type: Compulsory
Prerequisites: None
Objective: Students are expected to understand the research process. By the end of the course, students should be able to develop the operationalization of their research (problem formulation, literature review, variables, as well as methods and analysis techniques).
Main Topics: Scientific aspects in research methods, research methods and processes, research problems, scientific statements, research approaches, literature review preparation, research variables, sampling techniques, data collection methods, research design, scientific writing, and the concepts of proposal and thesis writing.

References:

1. Arikunto, Suharsimi. Prosedur Penelitian suatu Pendekatan dan Praktek. Rineka Cipta. Jakarta 1998.
2. Burhan Bungin. Penelitian Kualitatif untuk Komunikasi, Kebijakan Publik dan Ilmu Sosial lainnya. Fajar Interpratama Grafika. Jakarta. 2007.
3. Berry, Ralph. The Research Project: How to Write It. Routledge. 2005.
4. Babbie, E. 1992. The Practice of Social Science. Belmont.
5. Backstrom, CH. & Cesar Hursh. 1981. Survey Research. New York. Macmillan.
6. Brewer J. & Hunter A. 1989. Multimethod Research: A Synthesis of Styles. New Burry park. London.
7. Converse, JM. & S. Presser. 1986. Survey Questions: Handcrafting the Standardized Questionnaire. Newburry Park.

8. Dane, Francis C. Research Methods, Mercer University. California. 1990.
9. Erianto. Metodologi Polling Memberdayakan Suara Rakyat. Remaja Rosdakarya. Bandung. 1999.
10. Neuman, Lawrence. Social Research Methods, Qualitative and Quantitative Approaches. Allyn and Bacon. Boston. 2003
11. Norman K.D. and Yvonna S. L. Handbook of Qualitative Research. Sage Publication. Pvt. Ltd. India 1997.
12. O'Leary, Zina. The Essential Guide to Doing Research. Sage Publications. 2004.
13. Robert K. Yin. Studi Kasus Desain dan Metode. Raja Drafindo Persada. Jakarta. 2008.
14. Saris, Willem. Design, Evaluation, and Analysis of Questionnaires for Survey.

Course: URBAN DESIGN STUDIO
Course Code: TKW61014
Credits: 5
Type: Elective
Prerequisites: Urban Design
Objective: Students should be able to identify the typology, form, and urban space based on cultural, geographical, and technological aspects; identify and evaluate urban design issues; and design cities based on the principles of urban architecture and design using case studies.
Main Topics: Dimensions of urban design, elements and image of the city, urban design process, and urban design concepts.
References:

1. Alexander, C. 1987. A New Theory of Urban Design. Oxford: Oxford University Press.
2. Barnet, J. 1974. Urban Design as Public Policy. AR Books.
3. Bentley, Ian et.al. 1985. Responsive Environments: A Manual for Designers.
4. Broadbent, G. 1990. Emerging Concepts in Urban Design. London: VNR International.
5. Camona,M.et.al. 2003. Public Places, Urban Spaces: The Dimensions of Urban Design. Oxford: Architectural Press.
6. Cullen, G. 1979. The Concise Townscape. New York:VNR Company Inc.

Course: TRANSPORTATION PLANNING STUDIO
Course Code: TKW61015
Credits: 5
Type: Elective
Prerequisites: Transportation Planning
Objective: Students should be able to explain the various aspects of transportation system planning, plan transportation systems by implementing trip generation and attraction analysis, trip distribution, mode choice, and network assignment, analyze the spatial form of planning locations, evaluate the economic, financial, and institutional capabilities in transportation systems, and develop transportation system plans and design transportation nodes.
Main Topics: Introduction to transportation studio, four-step model of transportation, information systems, economics and institutions in transportation, network engineering, mode engineering, and transportation node engineering.
References:

1. Hilling, David. 1996. *Transport and Developing Countries*. London: Routledge
2. Morlok, Edward K. 1978. *Introduction to Transportation Engineering and Planning*. McGraw-Hill, Koga Khusa.Ltd.

3. Simpson, Barry. 1994. *Urban Public Transport Today*. London: E&FN Spon.
4. Tamin, O.Z.. 1997. *Perencanaan dan Pemodelan Transportasi*. Bandung: Penerbit ITB.
5. Tolley, R. Turton, Brian. 1995. *Transport Sistems, Policy and Planning: A Geographical Approach*. London: Longman Scientific & Technical.
6. White, Peter. 1995. *Public Transport: Its planning, management and operation*. London: UCL Press.
7. -, 1997. *IHCM; Indonesian Highway Capacity Manual*. Jakarta: Direktorat BINKOT, Ditjen Bina Marga.
8. -, Keputusan Direktur Jenderal Perhubungan Darat Nomor 274/ HK.105/DRJD/96 tentang Pedoman Teknis Penyelenggaraan Angkutan Umum di Wilayah Perkotaan dalam Trayek Tetap dan Teratur. Jakarta: Departemen Perhubungan Darat.

Course: REGIONAL PLANNING
Course Code: TKW61016
Credits: 3
Type: Compulsory
Prerequisites: None
Objective: Students are expected to utilize knowledge of regional planning, apply regional development theories, and formulate strategies for regional development and growth.
Main Topics: Issues in regional development and planning, understanding the concepts of regions and regional development planning, theories of regional development planning, regional development strategies, case studies in regional development planning, and concepts of sectoral regional development.
References:

1. Hill, Hal, (1989); *Unity and Diversity; Regional Economic Development in Indonesia Since 1970,* Oxford University Press.
2. Stohr, W.B. & DRF Taylor, (1981); *Development from Above or Below,* John Wiley & Sons.
3. Glasson, J. (1974); *An Introduction to Regional Planning,* Hutchinson, London.
4. Gore, C. (1984), *Region in Recession & Resurgence*, London, Methuen.
5. Dias, H. & B.W.E. Wickramanayake (1983); *Manual for Trainning in Rural Development Planning,* Bangkok, HSD-AIT.
6. Hansen, G.E. (Ed) (1981); *Agricultural and Rural Development in Indonesia,* Boulder, Westview Press.
7. Sitohang, Paul; (1977), *Pangantar Perencanaan Regional*, Lembaga Penerbit Fakultas Ekonomi Indonesia.
8. Sukanto Reksodiprodjo & A.R. Karseno; (1994); Ekonomi Perkotaan, BPFE-Yogyakarta.
9. Nurzaman, Siti Sutriah. 2012. *Perencanan Wilayah dalam Konteks Indonesia.* Bandung: Penerbit ITB.

Course: CITY-VILLAGE SOCIOLOGY
Course Code: TKW61017
Credits: 3
Type: Elective – Socio-Economic
Prerequisites: None
Objective: Students are expected to understand various fundamental concepts of society, the

sociological approach as a theoretical foundation for planning and development, elements of social change, urbanization, poverty, and other issues. They should also be able to understand and analyze the social characteristics of urban and rural areas in Indonesia and formulate a social issue in planning and development based on an analysis of a selected monitored case study.
Main Topics: the fundamentals of society, basics of social structure development, basic sociological theories, development and diversity of sociological paradigms, social change, social institutions, urban sociology, rural sociology, urban-rural relationships, and sociological approaches in planning and development
References:

1. Lynch, Keneth. 2005. *Rural-Urban Interaction in the Developing World.* Routledge
2. Flanagan, William G. 2010. *Urban Sociology: Image and Structure.America*: Rowman & Littlefield Publishers.
3. Thorns David C. 1995. *Fragmenting Societies, Comparative Analysis of Regional and Urban Development*. New York, America: Routledge.
4. Clammer, John. 1988. *Contemporary Urban Japan, Sociology of Consumption.* Blackwell Publisher.
5. Orton, Paul B. 1982. *Introductory Sociology***.** Homewood, Illionis: Dow Jones-Irwin.
6. Layder, Derek. 2006. *Understanding Social Theory***.** London: SAGE Publications
7. Weinstein, Jay. 2005. *Social and Cultural Change : Social Science for a Dynamic World, Second Edition.* Oxford: Rowman & Littlefield Publishers, Inc

Course: Development Financing
Course Code: TKW61018
Credit Load: 3 credits
Type: Elective – Socio-Economic
Prerequisite: None
Objective: Students are expected to explain the sources of development financing and the factors involved, to describe and identify the government's role in controlling urban politics and economics, to explain public goods, government/municipal finance, and budgeting, to identify sources of development financing, and to apply cost-benefit analysis.
Main Topics: The concept of financing and development, market failures and government intervention, government functions: allocation, distribution, and stabilization, politics, economics, and political economy, state-owned enterprises (SOEs) and regional government-owned enterprises (BUMD), taxation, domestic savings, non-conventional sources of financing, development financing in the era of autonomy, urban infrastructure development financing, corporate planning, participatory investment, public choice and voting, as well as cost-benefit analysis.
References:

1. Davey. KJ. Pembiayaan Pemerintah Daerah. Jakarta: UI.Press
2. Mangkusubroto, Guritno. Ekonomi Publik. Yogyakart : BPFE Universitas Gadjahmada
3. Due. John F. Keuangan Negara: Perekonomian Sektor Publik. Jakarta: Penerbit Erlangga.

Course: COMMUNITY-BASED DEVELOPMENT
Course Code: TKW61019
Credit Load: 3 credits
Type: Elective – Socio-Economic
Prerequisite: None
Course Objectives: Students will be able to understand the basic concepts and methods of participatory development, comprehend and analyze case studies related to the successful implementation of community-based development concepts, and analyze and formulate solutions to development issues through community participation programs.

Main Topics: Basic concepts of participatory development, the participatory development process in urban infrastructure development, methods for socialization, monitoring, and evaluation in the implementation of community-based development, and case studies on participatory development.

References:

1. Badan Kebijaksanaan dan Pengendalian Perumahan dan Permukiman Nasional. 1997. *Pemberdayaan Masyarakat dalam Pembangunan Prasarana Lingkungan*. Jakarta.
2. Badan Kebijaksanaan dan Pengendalian Perumahan dan Permukiman Nasional. 1997. *Penerapan Strategi Pemberdayaan Masyarakat dalam Pembangunan Prasarana Lingkungan.*
3. Badan Kebijaksanaan dan Pengendalian Perumahan dan Permukiman Nasional. 1997. *Pemberdayaan Masyarakat Melalui Kemitraan Pariwisata*. Jakarta.
4. Naraya D. 1996. *The Contribution of People's Participation (Environmentally Sustainable Development Occasional Paper Series No. 1)*. Washington DC: The World Bank.

Course: KKN-P/Internship
Course Code: FAT60002
Credit Load: 4 credits
Type: Compulsory
Prerequisite: Urban Design Studio or Transportation Planning Studio
Course Objectives: Students will gain practical field experience and apply their knowledge in the planning field as an effort to address real-world development issues. The course aims to provide orientation for students in preparing and developing an interest in their thesis, as well as to offer insights into the job market related to urban and regional planning.

Main Topics: Procedures and requirements for student internships, the objectives of the KKN course, administrative procedures and requirements for undertaking internships, types of projects, institutions, and the feasibility of projects for internships. The course covers materials that students can engage with, either in whole or in part, through project work, and also includes the delivery of content related to the profession of regional and urban planners to broaden students' perspectives and interests for their thesis.

References:

1. Practical Work Guidebook
2. Other relevant books

Course: PROPERTY MANAGEMENT AND PLANNING
Course Code: TKW62013
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to explain the basic concepts of asset and property management, conduct analysis of asset and property management and planning, formulate concepts and strategies for asset and property planning, develop sustainability concepts for properties, and devise strategies to address issues related to assets and properties.

Main Topics: Basic concepts of assets and property, policies, regulations, and governance in the property business, property planning processes, stakeholders in property planning, market planning, physical planning, economic feasibility analysis in property planning, sustainable property, as well as issues and challenges in property planning and development.

References:

1. *Brown, J. Roger. 2005. Private Real Estate Investment.*
2. *Cadman, David, Property Development, third edition, London 1994*.
3. Harjanto, Budi, Konsep Dasar Penilaian Properti, Yogyakarta 2003
4. Kotler, Philip, Marketing Places, Attracting Investment, Industry, and Tourism to Cities, States and Nation, New York 1993
5. Nanthakumaran, N, Property Investment Theory, E & FN SPON, London 1988
6. Pakpahan Deddy H. (2004). Protret Industri Property-Property Nasional 1997-2003. Media Headline Publishing. Jakarta.
7. Ratcliffe, et al. 2005. Urban Planning and Real Estate Development. Taylor and Francis e-Library.
8. Siregar, Doli D, , "Manajemen Aset", Gramedia, Jakarta, 2004
9. Smith, et al. 2008. Residential Landscape Sustainability. Blackwell Publishing.
10. Sujarto Djoko. 1996. Kota Baru Peluang dan Strategi Pengembangannya. Makalah Seminar Sehari Peluang dan Strategi dalam Pengembangan Kawasan Pusat Kota dan Permukiman Baru, Surabaya
11. Travis, Ginger, Real Estate Development, Principles and Process, Washington 1991
12. United Nations Conference on Human Settlements (Habitat II). 2001. The Istambul Declaration and The Habitat Agenda. Nairobi.
13. United Nations Conference on Human Settlements (Habitat II). 1996. The Habitat Agenda, Goal and Principles, Commitments and Global Plan of Action. Turkey.
14. Wicaksono Andie A. (2002). Mengelola Investasi Real Estate. Trubus Agriwidya. Semarang Jawa Tengah

15. Yu, Shi-Ming, Property Investment Decisions, A Quantitative Approach, E & FN SPON, London,1993

Course: URBAN MANAGEMENT
Course Code: TKW62014
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand various trends and theories of urban management and development in the context of developing countries, articulate innovative multi-actor and multi-disciplinary approaches in urban management, identify variables in urban management development and their strategies, and analyze and develop issues, development potentials, strategies, and policies through case studies.

Main Topics: Strategic planning, Logic Model, City Marketing & City Branding, tasks of urban management, urban economics, politics & urban management policies, urban infrastructure investment opportunities, public-private partnerships, and sustainable city management.

References:

1. Ahmad Nurmandi. 1999. *Manajemen Perkotaan, Aktor Organisasi, dan Pengelolaan Daerah Perkotaan di Indonesia.* Yogyakarta: Lingkaran.
2. Martland, Carl D. 2012. *Towards More Sustainable Infrastructure*. Massachussets: John Willey & Sons Inc. MIT.
3. Mattingly, M. 1995. Urban Management in less Developed Countries, *The Working Paper No* 72, World Bank.
4. Levine, Harvey A. 2005. *Project Portfolio Management*. San Fransisco: Josse-Bass - John Willey & Sons Inc.
5. Institute for housing and Urban Development Studies. 2012. *Urban Management and Development.* The Netherlands: Erasmus University Rotterdam.
6. John Matt, Phillips Fox, Partner, Solicitors, The Instrument of Urban Planning: Urban Management
7. Integrating Disaster Risk Management into Urban Management, Disaster Risk Management Practitioners Handbook, Shanghai, China
8. W.K. Kellogg Foundation. 2004. *Logic Model Development Guide.* available at http://www.wkkf.org

Course: URBAN LANDSCAPE STUDIES
Course Code: TKW62015
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand and explain the factors that shape

Ministry of Environment, Forests and Climate Change, Government of India. A Framework for Climate Change

landscapes, the benefits of landscape studies in planning, the concept of landscape engineering in planning, and will be able to analyze and develop landscape concepts in various related issues.

Main Topics: Basic understanding of landscape studies, types of landscape studies, factors shaping landscapes, management of natural and built landscapes, landscape management, and concepts for developing built and natural landscapes.

References:

1. Frohn, Robert C. 1998. Remote Sensing fro Landscape Ecology. Lewis Pub. Washington DC. 99 p
2. M. Laurie, An Introduction to Landscape Architecture, 1975
3. Odum, E. P.; Barrett, G. W. (2005).Fundamentals of Ecology. Brooks Cole. 598. ISBN 978-0-534-42066-6.

Course: ENVIRONMENTAL MANAGEMENT RELATED TO CLIMATE CHANGE
Course Code: TKW62016
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand environmental functions, identify components in environmental management, comprehend and evaluate the relationship between human activities and their impact on the environment, and calculate the impact of activities on components that trigger climate change.

Main Topics: Causes and impacts of climate change, the concept of the relationship between human activities and the environment, the concept of climate change, environmental evaluation methods, and techniques for environmental management scenarios and their implications.

References:

1. Vulnerability Assessments. 2014. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, India. Project on Climate Change Adaptation in Rural Areas of India.
2. Thomas Downing & Anand Patwardhan. 2005. Assessing Vulnerability for Climate Adaptation. CIAT Book Chapters.
3. Robin Bing Rong. 2010. GIS-Based Climate Change Adaptation Decision Support Tool (ADST): Indices to Assess Agricultural Vulnerability
4. Arief Anshory Yusuf & Herminia Francisco. 2009. Climate Change Vulnerability Mapping for Southeast Asia. SIDA
5. Alexander, L. V., P. Uotila, and N. Nicholls, 2013. Influence of sea surface temperature variability on global temperature and precipitation extremes. JURNAL GEOFISIKA. CXVIII: 1-16

6. Alexander, L. V., et al., 2006. Global observed changes in daily climate extremes of temperature and precipitation. JURNAL GEOFISIKA. CXI
7. Bates, Bryson, dkk. 2008. Climate Change and Water. Geneva: Intergovernmental Panel on Climate Change
8. Dai, A., 2013. Increasing drought under global warming in observations and models (online). III: 52–58
9. Wang, X. L. L., and V. R. Swail, 2006. Climate change signal and uncertainty in projections of ocean wave heights. XXVI: 109–126
10. Dangermond, J. dan Artz, M.. 2010t,Climate Change is a Geographic Problem. ESRI
11. Trofimenko, N. 2011. Climate Change: Current Issues. Kiel Institute for the World Economy.
12. UNFCCC. 2007 Climate Change: Impacts, Vulnerabilities and Adaptations in Developing Countries. UNFCCC

Course: ENVIRONMENTAL PLANNING AND MANAGEMENT
Course Code: TKW62017
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand and explain environmental issues and problems, policies related to environmental planning, the environmental planning process, the integration of environmental planning into comprehensive/community planning, environmental planning methods, and aspects of community aspirations/perceptions.

Main Topics: Introduction to environmental planning, policies related to environmental planning, integration of environmental planning into comprehensive planning, environmental planning processes, and methods in environmental planning.

References:

1. Jeroen C. J. M. van den Bergh, Kenneth John Button, Peter Nijkamp (2007), Environmental planning *Volume 8 from Classics in planningElgar reference collection*. Indiana: Edward Elgar.
2. Christian Ndubisi Madu (2007), Environmental Planning And Management, Imperial College Press
3. Thomas Dunne (1978), Water in Environmental Planning, W. H. Freeman
4. Charles H. Eccleston (2010), NEPA and Environmental Planning: Tools, Techniques, and Approaches for Practitioners, CRC Press.
5. Paul Selman (2000), Environmental Planning: The Conservation and Development of Biophysical Resources The Conservation and Development of Biophysical Resources Series, SAGE.
6. Charles H. Eccleston (2010), NEPA and Environmental Planning: Tools, Techniques, and Approaches for Practitioners, CRC Press.
7. Chris Maser (2010), Social-Environmental Planning: The Design Interface Between Every forest and Every city, Social Environmental Sustainability CRC Press.
8. Robert Cox (2006), Environmental Communication and the Public Sphere, SAGE Publication

Course: RENEWABLE ENERGY MANAGEMENT
Course Code: TKW62018
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to identify types of renewable energy that have the potential to be developed in Indonesia, identify the potential and challenges of renewable energy development in Indonesia, analyze the environmental impact of renewable energy utilization, and calculate the potential and utilization of renewable energy.

Main Topics: Renewable energy that can be developed in Indonesia, the environmental impact of renewable energy utilization, methods for calculating the potential production and utilization of rural renewable energy, human resource aspects in renewable energy management, and components of renewable energy management.

References:

1. Kalbande, S dkk. 2011. Bioenergy assessment and its integration for self-sufficient renewable energy village. KARNATAKA J. AGRIC. SCI. XXIV (2): 207-210
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Course: DISASTER-PRONE AREA PLANNING
Course Code: TKW62019
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand the disaster management cycle, comprehend policies related to disaster risk reduction, understand the role of spatial planning in

disaster risk reduction, collect, analyze, and communicate disaster-related information, analyze disaster risk levels, and explain and utilize methods used in disaster analysis.

Main Topics: Policies related to disaster risk reduction and spatial planning, disaster risk calculation, geoinformation technology for major disasters, remote sensing technology for disaster monitoring, management systems for accessing geoinformation data, disaster analysis using GIS for events such as landslides, floods, and volcanic eruptions, as well as determining evacuation routes and evacuation sites.

References:

1. Alfred Olfert, Stefan Greifing and Maria J. Batista (2006). Regional multy-risk review, hazards weighting, and spatial planning response to risk results from European case studies, Natural Affecting the Spatial Development of European Regions, Page 125-151.
2. Bishop Ian D., Rabifard A., and Sutanta Heri (2009). An Integrating Approach for Disaster Risk Reduction using Spatial Planning and SDI Platform, Proceedings of the Surveying & Spatial Sciences Institute Biennial International Conference, Adelaide 2009, Surveying & Spatial Sciences Institute, pp. 341351.
3. Burdy J (1998). Cooperating With Nature, Confronting Natural Hazards with Land Use Planning for Sustainable Communities, Joseph Henry Press-USA.
4. Chamsyah Bachtiar H.E. (2007). Mainstreaming Disaster Risk Reduction in National Policies and Programs: An Overview of National Action Plans for Disaster Risk Reduction in Indonesia, Delivered to the 2nd Asian Ministerial Conference on Disaster Risk Reduction, New Delhi.
5. Fleischhauer, M. (2008). The Role of Spatial Planning in Strengthening Urban Resilience, Spinger.
6. Food and Agriculture Organisation of United Nations (2008). Disaster Risk Management Systems Analysis. A Guide Book, Rome.
7. Hutton David and Haque C. Emdad (2004). Human Vulnerability, Dislocation and Resttlement: Adaptation Process of River Bank Erosion-induced Displaces in Bangladesh. Journal Disasters, Blackwell, p. 42-62.
8. Levy Jason, Badri Ali S., Asgary Ali, and Eftekhari A.R. (2006). Post-disaster Resettlement, Development and Change: A Case Study of the 1990 Manjil Earthquake in Iran. Journal Disasters, Blackwell, p. 451-468.
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10. Ngoedijo Widjoyo (2003). An Overview of Disaster Mitigation in Local Planning and Programming in Decentralized Indonesia. Asian Regional Conference on Urban Infrastructure Financing and Disaster Mitigation. Srilangka.
11. UN-ISDR (2005). Hyogo Frame Work for Action 2005-2015, Building the Resilience of Nations and Communities to Disaster.
12. Paris Remi, Levine Tamara and Wang Shannon (2010). Strategic Environmental Assessment and Disaster Risk Reduction, UNDP

Course: COASTAL AND SMALL ISLAND PLANNING
Course Code: TKW62020
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to evaluate, analyze, and plan coastal areas in Indonesia systematically and comprehensively, understand the characteristics of coastal areas as highly potential regions for general development, comprehend policies on spatial utilization in coastal areas, understand the potential and challenges of coastal area planning, and develop strategies for coastal area development.

Main Topics: Concepts and definitions of coastal area management, policies and strategies for coastal area development, basic principles of integrated coastal area management, minapolitan as a coastal area management approach, characteristics, structure, and dynamics of coastal ecosystems, disaster-prone area planning in coastal regions, coastal and small islands zoning plan development, introduction to GIS and remote sensing for coastal area analysis, the concept of integrated coastal area management based on ecosystems and environmental information, the role of communities in integrated coastal area management, and lessons learned from integrated coastal area management in various countries.

References:

1. A. Karsidi (1995). Pembangunan Modul Aplikasi GIS untuk Perencanaan Fisik Wilayah Pesisir. Direktorat Teknologi Inventarisasi Sumber Daya Alam Deputi Pengembangan Kekayaan Alam Badan Pengkajian dan Penerapan Teknologi.
2. Arief Satria (2009). Ekoligi Politik Nelayan. LkiS Printing Cemerlang-Yogyakarta.
3. Bangun Mulyo Sukoco (2003). Penggunaan Metode Analis Ekologi dan Penginderaan Jauh untuk Pembangunan Sistem Informasi Gografis Ekosistem Pantai. Makara Sains Vo. 7 No.1.
4. Direktorat Pengembangan Kawasan Khusus dan Tertinggal (2004). Tata Cara Pengembangan Kawasan untuk Percepatan Pembangunan Daerah. BAPPENAS.
5. Hikmah & Agus Heri Purnomo, (2012). Kesiapan dan Strategi Kebijakan Pengembangan Minapolitan Berbasis Perikanan Budidaya. Jurnal Kebijakan Sosial Ekonomi Kelautan dan Perikanan Vol. 2 No. 1.
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8. Rokhmin Dahuri, Jacub Rais, Sapta Putra Ginting, dan M.J. Sitepu (2001). Pengelolaan Sumber Daya Wilayah Pesisir dan Lautan secara Terpadu. Pradnya Paramita-Jakarta.
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10. Bengen (2001). Prosiding Pelatihan Pengelolaan Wilayah Pesisir Terpadu. Pusat Kajian Sumberdaya Pesisir dan Lautan Institut Pertanian Bogor.
11. Beatley, Timothy, et al. 1994. *An Introduction to Coastal Zone Management.* Island Press: Washington DC.
12. Kearney, John, et al. 2007. The Role of Participatory Governance and Community-based Management in Integrated Coastal and Ocean Management in Canada, *Coastal Management, Vol. 35, pg. 79-104.*

13. Erlend, Moksness, at al. 2009. *Integrated Coastal Zone Management.* UK: Wiley-Backwell

Course: WATERSHED PLANNING
Course Code: TKW62021
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand the concepts and definition of Watersheds (DAS) and the hydrological cycle, grasp the concept of "one watershed, one plan, and one management," utilize analytical methods in watershed planning, and comprehend the function and interrelation of watersheds with general spatial planning.

Main Topics: Understanding and implementation of Indonesian Law No. 7 of 2004, the definition and concept of watersheds, watershed planning variables, watershed management, watershed management concepts, impacts and issues in watershed management, surface water runoff analysis, soil erosion, GIS and remote sensing, land cover in watersheds, the role of communities in watershed management, and the zoning concept for watershed planning.

References:

1. Asdak, Chay. 1995. *Hidrologi dan Pengelolaan Daerah Aliran Sungai.* Gajah Mada University Press. Yogyakarta.
2. Goodman, A.S. 1984. *Principles of Water Resources Planning*. New Jersey.
3. Watershed Management Resource Kit, Modules. GTZ.
4. UU RI No. 7 Tahun 2004 tentang Sumber Daya Air.
5. UU No. 26 Tahun 2007 tentang Penataan Ruang.

Course: NEW AUTONOMOUS REGIONAL PLANNING
Course Code: TKW62022
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to explain and understand the concepts and principles of regional autonomy, the legal aspects of managing new autonomous regions, various issues and challenges in the planning and development of new autonomous regions, and formulate guidelines or improvement plans for the planning and development of new autonomous regions.

Main Topics: Basic concepts of regional autonomy, policies for managing new autonomous regions, legal aspects of managing new autonomous regions, principles of planning for new autonomous regions, collaboration between governments and other parties in planning and managing new autonomous regions, sectoral planning in new autonomous regions, conflicts,

issues, and potentials in planning new autonomous regions, and lessons learned from planning and developing new autonomous regions in various areas.

References:

1. Sutapa, Mada. 2005. "Perspektif Desentralisasi dalam Konteks Desentralisasi Pemerintah Daerah." *Jurnal Manajemen*, October 2005.
2. Cahyani, Kartika. 2009. "Model Kerja Sama Antar Daerah dalam Rangka Mendukung Otonomi Daerah di Daerah Istimewa Yogyakarta," in *Jurnal Riset Daerah*, Vol. VIII, No.2, August 2009.
3. Gabbe, Jens, et al. 2006. *White Paper on European Border Regions Final Version*. Association of European Border Regions (AEBR). Gronau.
4. Tarigan, Antonius. tanpa tahun. *Kerja Sama Antar Daerah untuk Peningkatan Penyelenggaraan Pelayanan Publik dan Daya Saing Wilayah.* Direktorat Otonomi Daerah, Bappenas.

Course: SUSTAINABLE VILLAGE PLANNING AND DESIGN
Course Code: TKW62023
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand the basic concepts of sustainable villages, identify the criteria for sustainable villages, analyze potentials and challenges related to sustainable villages, develop concepts and strategies for sustainable villages, and design a sustainable village in physical and spatial terms.

Main Topics: Basic concepts of sustainable villages, criteria and variables for sustainable villages, methods and analytical techniques in sustainable village development, issues and challenges of rural sustainability, social, economic, and environmental aspects in sustainable village development, and concepts and strategies for sustainable village planning and design.

References:

1. Norton, Roger D. 2004. *Agricultural Development Policy: Concepts and Experiences*. Food and Agriculture Organization of the United Nations: John Wiley & Sons, Ltd.
2. Ashley, Caroline, and Simon Maxwell. 2001. “Rethinking Rural Development,” *Development Policy Review*, 19(4): 395-425. Blackwell Publishers, Oxford, UK and 350 Main Street, Maiden, MA 02148, USA.
3. Clayton-Dalal, Barry, David Dent, and Oliver Dubois. 2003. *Rural Planning in Developing Countries: Supporting Natural Resource Management and Sustainable Livelihoods*. London: Earthscan Publications, Ltd.

Course: PLANNING EVALUATION
Course Code: TKW62024
Credit Load: 3 credits
Type: Compulsory
Prerequisite: None
Course Objectives: Students will understand the various types of evaluation, comprehend problem identification and evaluation in policy planning, be able to formulate problem statements and establish criteria for planning evaluation, and develop a program based on policy analysis that is monitored and evaluated in its implementation as an effective option in line with projected objectives.

Main Topics: Concepts and definitions of planning evaluation, methods of planning evaluation, design of performance monitoring systems and planning studies, evaluative data analysis, conflict management, and the development of various methods in planning evaluation.

References:

1. Just, Richard E., Darrell L. Hueth, Andrew Schmitz. 2004. *Economics of Public Policy: A Practical Approach to Project and Policy Evaluation*. Cheltenham: Edward Elgar.
2. Patton, Carl V., and David S. Sawicki. 1986. *Basic Methods of Policy Analysis and Planning*. New Jersey: Prentice Hall.
3. Levine, Harvey A. 2005. *Project Portfolio Management*. San Francisco: Jossey-Bass - John Wiley & Sons Inc.
4. Langbein, Laura, and Claire L. Felbinger. 2006. *Public Program Evaluation*. New York: M.E. Sharpe.
5. Wholey, Joseph S., Harry P. Hatry, Kathryn E. Newcomer (editors). 2004. *Handbook of Practical Program Evaluation*. San Francisco: John Wiley & Sons Inc.
6. Holden, Debra J., and Marc A. Zimmerman (editors). 2009. *A Practical Guide to Program Evaluation Planning*. London: Sage Publication.
7. M. Fadlilah Putra. *Studi Kebijakan Publik dan Pemerintahan dalam Perspektif Kuantitatif (Teknik, Metode dan Pendekatan)*, Universitas Brawijaya Press-Malang.

Course: COLLOQUIUM
Course Code: TKW60002
Credit Load: 3 credits
Type: Compulsory
Prerequisite: None
Course Objectives: Students will be able to understand and become familiar with the research process; identify and formulate the research background and problems that form the basis of the research; understand and formulate research problem statements; identify the theories and concepts used during the research process; structure the theoretical and conceptual framework used; develop the methods used in the research process, including data collection and analysis

methods; design testing procedures; and present their research proposals to fellow students and faculty members.

Main Topics: Proposal themes, titles; approval of themes and titles by supervisors; background and problem formulation; general overview of the study/research area; literature review/theoretical foundation; theoretical framework; research methodology and survey design; submission of complete proposals; proposal seminars.

References:

1. Arikunto, Suharsimi. *Prosedur Penelitian: Suatu Pendekatan dan Praktek*. Rineka Cipta. Jakarta 1998.
2. Berry, Ralph. *The Research Project: How to Write It*. Routledge. 2005.
3. Brewer, J., & Hunter, A. 1989. *Multimethod Research: A Synthesis of Styles*. Newbury Park. London.
4. Dane, Francis C. Research Methods, Mercer University. California. 1990.
5. Neuman, Lawrence. Social Research Methods, Qualitative and Quantitative Approaches. Allyn and Bacon. Boston. 2003
6. Norman K.D. and Yvonna S. L. Handbook of Qualitative Research. Sage Publication. Pvt. Ltd. India 1997.
7. Babbie, Earl. 1983. The Practice of Social Research. Wadsworth Publishing Company, California.
8. Nachmias, David and Nachmias, Chava. 1987. Research Methods in The Social Sciences. St. Martin's Press, New York.
9. Schumacher, Sally and McMillan, James H. 1993. Research in Education: A Conceptual Approach. Harper Collins College Publishers, New York

Course: REGIONAL PLANNING STUDIO
Course Code: TKW62025
Credit Load: 5 credits
Type: Compulsory
Prerequisite: Regional Planning
Course Objectives: Students will be able to apply regional planning theories and methods to real-world cases, providing experience in the processes and procedures of regional planning, thereby gaining the ability to develop integrated spatial planning strategies and plans.

Main Topics: Concepts of developing agropolitan, minapolitan, industrial, tourism, and other sectors; methods and techniques for data collection in regional planning; analysis methods; and the formulation of goals, concepts, and strategies in regional planning.

References:

1. Hill, Hal. (1989). *Unity and Diversity: Regional Economic Development in Indonesia Since 1970*. Oxford University Press.
2. Stohr, W.B. & D.R.F. Taylor. (1981). *Development from Above or Below*. John Wiley & Sons.

3. Glasson, J. (1974). *An Introduction to Regional Planning*. Hutchinson, London.
4. Gore, C. (1984). *Region in Recession & Resurgence*. London, Methuen.
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6. Hansen, G.E. (Ed). (1981). *Agricultural and Rural Development in Indonesia*. Boulder, Westview Press.
7. Sitohang, Paul. (1977). *Pengantar Perencanaan Regional*. Lembaga Penerbit Fakultas Ekonomi Indonesia.
8. Sukanto Reksodiprodjo & A.R. Karseno. (1994). *Ekonomi Perkotaan*. BPFE-Yogyakarta.

Course: ENTREPRENEURSHIP
Course Code: UBU60003
Credit Load: 2 credits
Type: Compulsory
Prerequisite: None
Course Objectives: Students will be able to enhance their intellectual abilities, improve their professional skills, and better recognize their professional/intellectual values and aesthetics. They will develop the ability to lead and communicate according to their expertise, adapt to a broader environment, commit to lifelong learning, and expand their knowledge and responsiveness to social, cultural, global, and business issues as professional engineers.

Main Topics: Communication techniques, both oral and written; professional ethics; introduction to entrepreneurship; management of consultancy/contracting services; introduction to financial management; basics of investment planning; introduction to Total Quality Management (TQM); the "5S" work attitude and decision-making processes.

References:

1. Bill Scott, 1986. *The Skill of Communication*, translated by Agus Maulana, Jakarta, Binarupa Aksara.
2. Covey, Stephen R., 1994. *The Seven Habits of Highly Effective People*, translated by Budijanto, Jakarta, Binarupa Aksara.
3. Harseno, K., 1996. *Introspection*, Jakarta.
4. Mangunwijaya, Y.B. (ed), 1983. *Technology and Cultural Impact*, Jakarta, Yayasan Obor Indonesia.

Course: BACHELOR'S THESIS
Course Code: UBU4001
Credit Load: 6 credits
Type: Compulsory
Prerequisite: Colloquium and KKN-P
Course Objectives: To guide and develop students' ability to synthesize all the knowledge they

have acquired during the urban and regional planning education program. This synthesis is manifested in an independent work that meets scientific standards, with research results that have implications for understanding the field of urban and regional planning.

Main Topics: Understanding the thesis; revision of the thesis proposal, assistance, data collection, data analysis, drawing conclusions, presentation of results, thesis defense.

References: (to be adjusted according to the student's research title)

Course: TOURISM STUDIES
Course Code: TKW61020
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand the fundamentals of tourism and tourism planning at both micro and macro levels, explain the impacts of tourism activities, identify potential and challenges, describe the scope of tourism, various forms of tourism activities, and analyze tourism phenomena through case studies.

Main Topics: Basic knowledge of tourism, tourism and tourism planning, tourists as a demand component, supply components, tourism development, transportation and tourism, sex, money, and tourism, regional concepts, tourism competitiveness analysis, tourism impacts, tourism infrastructure, heritage tourism, rural tourism, urban tourism, and nature tourism.

References:

1. Pearce, Douglas. 1989. *Tourist Development*. Longman Scientific & Technical. New York.
2. Gunn, Clare A. 1994. *Tourism Planning; Basic, Concepts, Cases*. Taylor & Francis. Washington DC.
3. Shaw, Gareth and Williams, Allan M. 2004. *Tourism and Tourism Spaces*. Sage Publication. London.
4. March, R. and Woodside, A.G. *Tourism Behaviour; Travellers' Decisions and Actions*. CABI Publishing. USA.
5. Mowforth, Martin and Munt, Ian. 2007. *Tourism and Sustainability; Development and New Tourism in The Third World*. Second Edition. Routledge. New York.
6. Suharso, Tunjung W. 2009. *Perencanaan Obyek Wisata dan Kawasan Pariwisata dalam Konteks Penataan Ruang*. PPSUB, Malang.

Course: POVERTY, CONFLICT, AND PUBLIC POLICY
Course Code: TKW61021
Credit Load: 3 credits

Type: Elective
Prerequisite: None
Course Objectives: Students will be able to identify the causes of poverty based on a multidimensional concept and analyze alternative approaches to poverty alleviation intervention policies, particularly in relation to spatial planning.

Main Topics: Issues and concepts of development and poverty within the framework of sustainable development, strategies for sustainable poverty alleviation, sustainable development indicators related to poverty alleviation efforts, and evaluation and analysis of strategies for policy implementation.

References:

1. Alkire, S. 2002. *Valuing Freedom*. Oxford: Oxford University Press.
2. Bappenas and Poverty Alleviation Committee. 2005. *Strategi Nasional Penanggulangan Kemiskinan*. Jakarta: Bappenas
3. Bossel, H. 1999. *Indicators for Sustainable Development: Theory, Method, Applications*. Winnipef: IISD (International Institute for Sustainable Development).
4. Haydar, B. 2005. *Extreme Poverty and Global Responsibility*. Metaphilosophy 36(1/2): 240-253
5. Indrawati, S.M. 2005. *Basic rights approach to poverty reduction and bureaucracy reform in Indonesia*. Jakarta
6. World Bank. 2002. *A Sourcebook for Poverty Reduction Strategies*. Washington
7. World Bank. 2003. *Poverty Reduction Handbook*. Washington DC.

Course: BORDER AREA STUDIES
Course Code: TKW61022
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand the concepts of border area planning and the associated challenges, analyze border conflicts, comprehend the movement of commodities across borders, and develop and formulate concepts for the development of border areas.

Main Topics: The meaning and scope of border area planning and policy, potentials and challenges of border areas, sectoral approaches in border area planning, regional approaches in border area planning, spatial and economic planning of border areas, approaches to border area development, education, economy, and health in border areas, infrastructure management and area development, the role of mapping in supporting border area planning, the interconnection of upstream-downstream economic activities, and sustainable border area development.

References:

1. Wibowo, Soetrisno, 2004. *Konsep, Teori dan Landasan Analisis Wilayah*, Bayu Media Publishing.

2. Robinson, Tarigan, 2002. *Perencanaan Pembangunan Wilayah*, Dikti, Medan.
3. Alkadri, Muchdie and Suhandojo. 1999. *Tiga Pilar Pengembangan Wilayah: Sumberdaya Alam, Sumberdaya Manusia, Teknologi*. Jakarta: Pusat Pengembangan Kebijakan Teknologi Pengembangan Wilayah-BPPT Press.
4. Alkadri, et.al. (editors). 2001. *Manajemen Teknologi Untuk Pengembangan Wilayah*. Revised Edition. Jakarta: Pusat Pengembangan Kebijakan Teknologi Pengembangan Wilayah-BPPT Press.
5. Edgington, David W. and Fernandez, Antonio L. 2001. *The Changing Context of Regional Development*. In Edgington, David W. et.al. (eds). *New Regional Development Paradigms*, Vol. 2, pp. 3-14. London: Greenwood Press.
6. Glasson, John. 1974. *An Introduction to Regional Planning: Concept, Theory and Practice*. London: Hutchinson & Co. (Publishers) Ltd.
7. Gonzalez, Pablo Wong. 2001. *New Strategies of Transborder Regional Development*. In Edgington, David W. et.al. (eds). London: Greenwood Press.
8. Wu, Chung-Tong. 2001. *Cross-Border Development in a Changing World: Redefining Regional Development Policies*.

Course: INDUSTRIAL AREA PLANNING
Course Code: TKW61023
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: This course provides a foundation in industrial area planning, beginning with issues and developments in the industrial sector on a global scale. Additionally, it covers the planning of industrial areas, including physical spatial plans, site plans, and sectoral plans (activity plans). The course also addresses various challenges and concepts that need to be considered in industrial area planning.

Main Topics: Development and strategic issues of industrial areas, factors influencing industrial development, industrial zoning, structure and spatial patterns of industrial areas, development of industrial area activities, industrial site planning, clusters and centers, industrial externalities, and sustainable industries.

References:

1. Kwanda, Timoticin. 2000. "Pengembangan Kawasan Industri di Indonesia," in *Dimensi Teknik Arsitektur*, Vol. 28, No. 1, July 2000, pp. 54-61. Universitas Kristen Petra.
2. Indonesian Law No. 3 of 2014 on Industry.
3. Minister of Industry Regulation No. 40/M-IND/PER/6/2016 on Technical Guidelines for Industrial Area Development.
4. Anderson, Thomas (ed). 2004. *The Cluster Policy Whitebook*. Malmo: IKED.
5. Blakely, Edward. 1994. *Planning Local Economic Development: Theory and Practice*. London: Sage Publications.

6. Shahab, Halim. 1992. "Perkembangan dan Prospektif Bisnis Kawasan Industri di Indonesia," *Infopapan*, 17-20.
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9. Nurhayati, Nunung, et al. 2012. "Kelayakan dan Strategi Pengembangan Usaha Industri Kecil Tahu di Kabupaten Kuningan, Jawa Barat," *Manajemen IKM*, Vol. 7, No.2, September 2012, pp. 111-121. Institut Pertanian Bogor.
10. Pitelis, Christos, et.al. (eds). 2006. *Clusters and Globalisation*. Massachusetts: Edward Elgar Publishing Inc.
11. PP No. 14 tahun 2015 tentang Rencana Induk Pembangunan Industri Nasional tahun 2015-2035.
12. PP No. 41 tahun 2015 tentang Pembangunan Sumber Daya Industri.
13. PP No. 142 tahun 2015 tentang Kawasan Industri.
14. PP No. 107 tahun 2015 tentang Izin Usaha Industri.

Course: CITY MORPHOLOGY
Course Code: TKW61024
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to explain the concepts of city morphology and structure, analyze urban structures using spatial analysis, and evaluate sustainable urban forms.

Main Topics: Basic concepts of city morphology and structure, urban development, urbanization and cities, city typologies, urban sprawl, analysis of urban spatial structures, urban design in city development, city form review, sustainable city forms, and future urban forms.

References:

1. Carmona, M. et al. 2003. *Public Places, Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press.
2. Graham, S. & Marvin, S. *Telecommunications and The City: Electronic Spaces, Urban Places*. Routledge, New York.
3. Giovanni, M. *People and Space: New Forms of Interaction in the City Project*. Springer.
4. Bosselman, P. *Urban Transformation: Understanding City Design and Form*. Island Press.

Course: ENVIRONMENTAL PERCEPTION AND SPATIAL BEHAVIOR
Course Code: TKW61025
Credit Load: 3 credits
Type: Elective

Prerequisite: None
Course Objectives: Students will be able to explain the concepts of perception and spatial behavior and their relation to urban and regional planning, understand and analyze central issues related to spatial perception and behavior, analyze variables related to spatial perception and behavior, and develop concepts and interpretations of spatial perception and behavior in the field of urban and regional planning.

Main Topics: Basic concepts and understanding of spatial behavior, environmental psychology and spatial cognition, dimensions of urban environmental perception, human-environment interaction, human movement, and related topics.

References:

1. Bechtel and Churchman (2002). *Handbook of Environmental Psychology*. John Wiley & Sons.
2. Bell, et al. (2001). *Environmental Psychology*. Harcourt College Publisher.
3. Bly and Rumelhart (1999). *Cognitive Science*. Academic Press.
4. Boothe (2002). *Perception of the Visual Environment*. Springer.
5. Carmona (2008). *Public Place, Urban Space*. Architectural Press.
6. Hedman and Jaszewski (1988). *Fundamentals of Urban Design*. Planner Press.
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8. Frascara (2002). *Design and the Social Sciences*. Taylor & Francis.
9. Friedman and Carterette (1996). *Cognitive Ecology*. Academic Press.
10. Halim (2005). *Psikologi Arsitektur*. PT. Gramedia Indonesia.
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12. McAndrew (1993). *Environmental Psychology*. Brooks/Cole Publishing Company.
13. Miles (1997). *Art, Space, and the City*. Taylor and Francis.
14. Nuallain (2000). *Spatial Cognition: Foundations and Applications*. John Benjamins Publishing Company.
15. Purwanto (2001). *Pendekatan Pemahaman Citra Lingkungan Perkotaan*. Dimensi Teknik Arsitektur, 29(1): 85-92.
16. Rapoport (1982). *The Meaning of the Built Environment*. Sage Publications.
17. Stangor (2004). *Social Groups in Action and Interaction*. Psychology Press.
18. Siekmann and Wahlster (2010). *Spatial Cognition VII*. Springer.
19. Stevens (2007). *The Ludic City*.
20. TCRP (1999). *Measuring Customer Satisfaction*. National Academy Press.
21. Vecci and Bottini (2006). *Imagery and Spatial Cognition*. John Benjamins Publishing Company.
22. Wormer (2007). *Human Behavior in The Social Environment, Micro Level*. Oxford University Press.

Course: HERITAGE CITY PRESERVATION
Course Code: TKW61026
Credit Load: 3 credits

Type: Elective
Prerequisite: None
Course Objectives: Students will be able to explain the importance of heritage city preservation, address issues related to heritage city preservation, assess and analyze the significance of urban cultural heritage, and develop preservation plans, select, and apply design approaches for city preservation.

Main Topics: The concept of cultural value in the context of area preservation, preservation of traditional villages and kampongs, the history of cities in Indonesia, research methods in urban history studies, the evolution of historical and cultural preservation approaches, concepts and criteria for preservation actions, urban design as an approach to heritage city preservation, urban revitalization, regeneration, renewal, and gentrification, integration of urban management in city rejuvenation strategies, concepts and strategies for urban rejuvenation, heritage cities, and principles of heritage cities.

References:

1. Carmona, Heath, Oc, Tiesdell. 2003. *Public Places, Urban Spaces*. Architectural Press.
2. Catanese, Anthony J. and Snyder, James. 1986. *Pengantar Perencanaan Kota*, translated by Susongko. Jakarta: Erlangga.
3. Handinoto, et al. 1996. *Perkembangan Kota dan Arsitektur Kolonial Belanda di Malang*. Yogyakarta: Andi.
4. Shirvani, Hamid. 1985. *Urban Design Process*. New York.
5. *Urban Design Compendium*.
6. Wiryomartono, A. B. 1995. *Seni Bangunan dan Seni Binakota di Indonesia*. Jakarta.
7. *Heritage City Action Plan Training Module*.
8. *Guidelines for Urban Settlement Rejuvenation*.
9. Cultural Heritage Law No. 11 of 2010.

Course: NEW CITY PLANNING
Course Code: TKW61027
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to define the general concept of a new city, explain the history, concepts, planning, and development of new cities, describe the typologies of new cities in Indonesia, understand new city development, and apply analytical processes and methods in new city planning.

Main Topics: Introduction to new city development, categorization of new cities, the emergence of new cities, criteria for selecting new cities, new city planning methods, management and governance of new cities, the roles of government, private sector, and communities in new city planning, case studies on metropolitan, satellite, and new city planning in developed countries.

References:

1. Djoko Sujarto. 1990. *Perkembangan Kota Baru Mimeographed*. ITB.
2. Djoko Sujarto and B. Kombaitan. 1989. *Konsepsi Pedoman Perencanaan dan Perancangan Kota Baru di Indonesia*. ITB.
3. Tunjung W. Suharso. 1998. *Aspek-Aspek Perencanaan dan Pembangunan Kota Baru Metropolitan*. Master's Thesis. ITB.
4. Christopher Silver. 1992. *Planning and the New American City*. *Journal PWK ITB*.
5. Lindsay W. 1971. *Using Models for New Town Design*. Architecture.

Course: SUSTAINABLE INFRASTRUCTURE
Course Code: TKW61028
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand and explain the concept of sustainable infrastructure, analyze and apply various analytical techniques to assess sustainability, and develop concepts or guidelines for the development of sustainable infrastructure.

Main Topics: Concepts of management and analysis techniques related to sustainable infrastructure, such as waste management (zero waste concept, mass balance analysis, and renewable vs. non-renewable energy), management of clean water supply systems, water leakage, water footprint, urban road design analysis, design analysis of urban road amenities, urban drainage design analysis, rural transportation planning concepts, integrated rural accessibility planning, and rural transportation services.

References:

1. Carlos, F. Dagando. 2010. *Public Transportation Systems: Basic Principles of System Design, Operations Planning, and Real-Time Control*. ITS Berkeley.
2. City of Melbourne. 2005-2010. *Street Furniture Plan*.
3. Crown Copyright. 2001. *Safety at Street Works and Road Work*. Department for Transport, The Scottish Executive, The National Assembly for Wales, Department for Regional Development, Northern Ireland.
4. *Development Control Advice Note 15*. 1999. *Parking Standard*.
5. *Demonstration of an Advanced Public Transportation System in the Context of an IVHS Regional Architecture*. 1994. Paper presented at the First World Congress on Applications of Transport Telematics and Intelligent Vehicle-Highway Systems, November 30-Dec 3, Paris, France.
6. Javier, Zamora. Rozas. 2006. *Advanced Public Transportation System: Deployment and Benefits*. UNB Transportation Group.
7. Jim, Gibbons. 1999. *Pavement and Surface Materials*. Uconn Extension Land Use Educator, Nonpoint Education for Municipal Officials, Number 8.
8. Mayor, Richard. M. 2007. *Street and Site Plan Design Standards*. Chicago Department of Transportation.
9. NPTEL. 2006. *Introduction to Transportation Engineering*.

10. Robert, C. 2001. *Walk-and-Ride: Factors Influencing Pedestrian Access to Transit, Journal of Public Transportation*, Vol. 3, No. 4, pp. 1-23.
11. U.S. Department of Transportation. 2005. *Evaluation of Innovative Uses of Advanced Public Transportation Systems Data in Multimodal Corridors*.
12. Vukan R. Vucik. 200x. *Urban Transit Operations, Planning and Economics*. John Wiley and Sons, Inc.
13. Dr. Ir. Saripih, M. Eng. 200x. *Pelestarian Sumber Daya Tanah dan Air*. Andi.
14. Pokja AMPL. 200x. *Pembangunan Air Minum dan Penyehatan Lingkungan di Indonesia*.
15. Oswar M. 200x. *Katalog Website Air Minum dan Penyehatan Lingkungan*. Pokja AMPL.
16. Daniel Mardiyarso. 200x. *CDM: Mekanisme Pembangunan Bersih*. Kompas Jakarta.

Course: WATER TRANSPORTATION
Course Code: TKW61029
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will understand the principles of water transportation development, comprehend and explain issues and aspects of water transportation concepts, and grasp the concept of water transportation as part of a broader and sustainable transportation system.

Main Topics: Introduction to water transportation, water transportation as part of sustainable transportation, water transportation as part of intermodal transport, water transportation development, water transport modes and infrastructure, water transportation planning, water transportation in Indonesia, lessons learned from water transportation development in developing and developed countries, and water transport design.

References:

1. Bambang Susantono, Danang Parikesit, Heru Sutomo, Muhammad Nanang, Sigit W. Prasetya. *1-2-3 LANGKAH: Langkah Kecil yang Kita Lakukan Menuju Transportasi yang Berkelanjutan*. Masyarakat Transportasi Indonesia, 2004.
2. Hershman, Marc J. *Urban Ports and Harbors Management*. New York: Taylor & Francis, 1988.
3. Ida Bagus Putu Adnyana, Ngakan Ketut Acwin Dwijendra. 2012. *Arsitektur dan Tata Ruang Pelabuhan di Bali*. Denpasar: Udayana University Press.
4. Karel Albert Ralahalu, M. Yamin Jinca et al. 2013. *Pembangunan Transportasi Kepulauan di Indonesia*. Brilian Internasional.
5. *Roll-on Roll-off Transport: Connecting Maritime Southeast Asia*. The Asia Foundation, 2010.
6. Kendall, Lane C. *The Business of Shipping*. Centreville, MD: Cornell Maritime Press, 1986.
7. U.S. Department of Transportation. *An Assessment of the U.S. Marine Transportation System: A Report To Congress*. September, 1999.

Course: SUSTAINABLE TRANSPORTATION
Course Code: TKW61030
Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to identify and evaluate the character, typology, form, and urban space of cities and urban transportation based on cultural, geographical, and technological aspects. They will be able to analyze urban and transportation issues, generate greater transit ridership as a natural consequence of mixed-use development around stations and along city corridors, and design and promote sustainable, affordable, and livable urban and transportation designs for city residents.

Main Topics: TOD (Transit-Oriented Development) Guidelines, developing strategies to measure TOD success, transit demand management, TOD in different states, TOD and household travel, making cities work, sustainable places, infrastructure financing for cities, elements of urban physical form and its image, and concepts of urban and transportation design.

References:

1. Chatman, D.G. 2006. *TOD and Household Travel: A Study of California Cities*. Institute of Transportation Studies, Department of Urban Planning, School of Public Affairs, Los Angeles.
2. Douglas, S. 2012. *TOD in the States*, Washington, D.C.
3. EPA. *Encouraging TOD: Case Studies That Work*.
4. Hazel, G., and R. Parry. 2004. *Making Cities Work*. Wiley Academy, London.
5. John, L. Renne. 2006. *Evaluating TOD Using a Sustainability Framework: Lessons from Perth's Network City*.
6. Jan, S. Wells, and Edward, J. Bloustein. 2005. *TOD: Developing a Strategy to Measure Success*, TRB.
7. Lynch, K. 1981. *A Theory of Good City Form*. Cambridge, Massachusetts: MIT Press.
8. Marta. 2012. *TOD Guidelines*.
9. *Infrastructure Financing Options for TOD*. 2013. United States Environmental Protection Agency.
10. Phillips, C. 2003. *Sustainable Place: A Place of Sustainable Development*. West Sussex: Wiley Academy.
11. Robert, C. 2003. *TOD Ridership Bonus: A Product of Self-Selection and Public Policies*.
12. Robert, C. 2001. *Walk-and-Ride: Factors Influencing Pedestrian Access to Transit*, *Journal of Public Transportation*, Vol. 3, No. 4, pp. 1-23.
13. S. Murphy. 2002. *Transit-Oriented Development and Joint Development in the United States: A Literature Review*. Research Results Digest. Washington, D.C.: Transportation Research Board, Transit Cooperative Research Program, No. 52.

Course: PLANNING INFORMATION SYSTEM APPLICATION
Course Code: TKW61031

Credit Load: 3 credits
Type: Elective
Prerequisite: None
Course Objectives: Students will be able to understand, apply, and develop spatial analysis and software applications based on geographic data for planning purposes.

Main Topics: Applications of remote sensing, land use and land cover mapping, Spatial Multi-Criteria Evaluation (SMCE) for decision-making, WebGIS, and the application of Stella software for planning.

References:

1. Shunlin Liang (2008). *Advances in Land Remote Sensing System, Modeling, Inversion and Application*. Department of Geography, University of Maryland, College Park, MD, USA. Springer.
2. Boris Escalante-Ramírez (2012). *Remote Sensing – Applications*. InTech, Croatia.

Course: PROFESSIONAL ETHICS
Course Code: FAT60001
Credit Load: 2 credits
Type: Mandatory
Prerequisite: None
Course Objectives: The Professional Ethics course provides an understanding of the importance of ethics and codes of conduct in planning activities. Additionally, it imparts knowledge about the development of soft skills required by planners to carry out planning activities effectively, including building work professionalism and addressing challenges in the profession and planning activities.

Main Topics: Ethics in the planning profession, the philosophy of ethics, environmental ethics, introduction to ethics, the planner's profession, ethics of planners in various planning practices, self-capability, development of planners' soft skills, professionalism, and challenges for planners in practice.

References:

1. Campbell, Heather. 2006. *Just Planning (The Art of Situated Ethical Judgment)*. Journal of Planning Education and Research. Vol. 26.
2. Corburn, Jason. 2003. *Bringing Local Knowledge into Environmental Decision Making*.
3. Scott, Bill. 1986. *The Skills of Communication*. Translated by Agus Maulana. Jakarta: Binarupa Aksara.
4. Covey, Stephen R. 1994. *The Seven Habits of Highly Effective People*. Translated by Budijanto. Jakarta: Binarupa Aksara.
5. Harseno, K. 1996. *Introspeksi*. Jakarta.
6. Brooks, M.P. 2002. *Planning Theory for Practitioners*. Chicago: Planners Press APA.

7. Mosca, Joseph B. 2000. *Human Resource Management*. USA.
8. Mosca, Joseph B., and Stuart Rosenberg. 2011. *Breaking Down the Barriers to Organizational Change*. International Journal of Management and Information Systems, Vol. 15, No. 3. The Clute Institutes.
9. Karyoedi, M. 2006. *Kerangka Etika di dalam Perencanaan Tata Ruang*, Material for Functional Planner Training Level I, SAPPK, ITB, Bandung, June 2006.
10. Sujarto, D. 2006. *Ethics in Urban and regional planning*. Material for Functional Planner Training Level I, SAPPK, ITB, June 2006.
11. Keputusan Musyawarah Nasional Asosiasi Perencana Pemerintah Indonesia Nomor 002/Munas-I/APPI/08/2006 tentang Kode Etik Perencana Pemerintah Indonesia.

MASTER'S PROGRAM (S-2) IN URBAN AND REGIONAL PLANNING

EDUCATION GUIDELINES OF MASTER'S PROGRAM (S-2) IN URBAN AND REGIONAL PLANNING OF ACADEMIC YEAR 2022-2023

1. VISION, MISSION, AND OBJECTIVES OF THE MASTER'S PROGRAM (S-2) IN URBAN AND REGIONAL PLANNING (PWK)

1.1 Vision of the Master's Program (S-2) in PWK

To become a high-productivity educational institution in Urban and Regional Planning with international competitiveness, oriented towards the development of planning principles and methods for the integration of rural-urban development and the realization of sustainable development.

1.2 Mission of the Master's Program (S-2) in PWK

1. To enhance the quality of graduates from the S-2 PWK program as planning experts capable of developing planning methods oriented towards the integration of sustainable rural-urban development.
2. To produce graduates capable of providing solutions to sustainable rural-urban development issues.
3. To conduct an efficient, effective, and healthy educational process.

1.3 Objectives of the Master's Program (S-2) in PWK

1. To improve the competitiveness of graduates as experts in developing planning principles and methods for solving rural-urban integration and sustainable development issues at the international level.
2. To accelerate the study period of S-2 students and improve the quality of new student admissions in the S-2 PWK program.
3. To increase student involvement in research activities and faculty community service.

2. GRADUATE PROFILE

2.1 Academic Degree

Graduates of the Master's Program (S-2) in PWK from the Faculty of Engineering, Universitas Brawijaya, hold the degree of Master of Urban and Regional Planning (M. PWK). This degree is awarded after students complete a minimum of 47 credits and undergo the graduation process. If there are future changes in regulations related to degree nomenclature, the degree for graduates of the Master's Program (S-2) in PWK will be adjusted accordingly.

2.2 Graduate Profile

The expected profile of graduates from the Master's Program (S-2) in PWK includes:

1. The ability to apply various research methods in planning analysis with an inter- or multidisciplinary approach.
2. The ability to provide practical solutions to urban and regional planning issues in society through innovative and proven research.

3. The ability to provide practical solutions to urban and regional planning issues in society through innovative and proven research.

3. LEARNING OUTCOMES

The learning activities in the Master's Program (S-2) in Urban and Regional Planning are expected to produce the following competencies for graduates:

Attitudinal Competencies Expected from Graduates of the Master's Program in PWK:

1. Be devoted to God Almighty and able to demonstrate religious attitudes.
2. Uphold human values in carrying out duties based on religion, morals, and ethics.
3. Contribute to improving the quality of life in society, the nation, the state, and advancing civilization based on Pancasila.
4. Act as citizens who are proud of and love their homeland, have nationalism, and a sense of responsibility to the country and nation.
5. Respect cultural diversity, views, religions, and beliefs, as well as the opinions or original findings of others.
6. Work cooperatively, demonstrate social sensitivity, and care for the community and environment.
7. Abide by the law and discipline in social and state life.
8. Integrate academic values, norms, and ethics.
9. Demonstrate responsibility in their field of expertise independently.
10. Internalize the spirit of independence, perseverance, and entrepreneurship.

Knowledge Competencies Expected from Graduates of the Master's Program in PWK:

1. Master the theory of urban and regional planning and development.
2. Have an in-depth understanding of the theory of planning and development systems for regions and cities.
3. Possess deep knowledge of the planning and development processes for regions and cities, particularly in specialized areas of urban and regional planning.
4. Be proficient in applying technological methods in specialized areas of urban and regional planning and development.
5. Understand the concept of academic integrity in general and the concept of plagiarism specifically, including types of plagiarism, consequences of violations, and prevention efforts.
6. Be capable of developing research synthesis results to achieve national and international scientific recognition.

General Skills Competencies Expected from Graduates of the Master's Program in PWK:

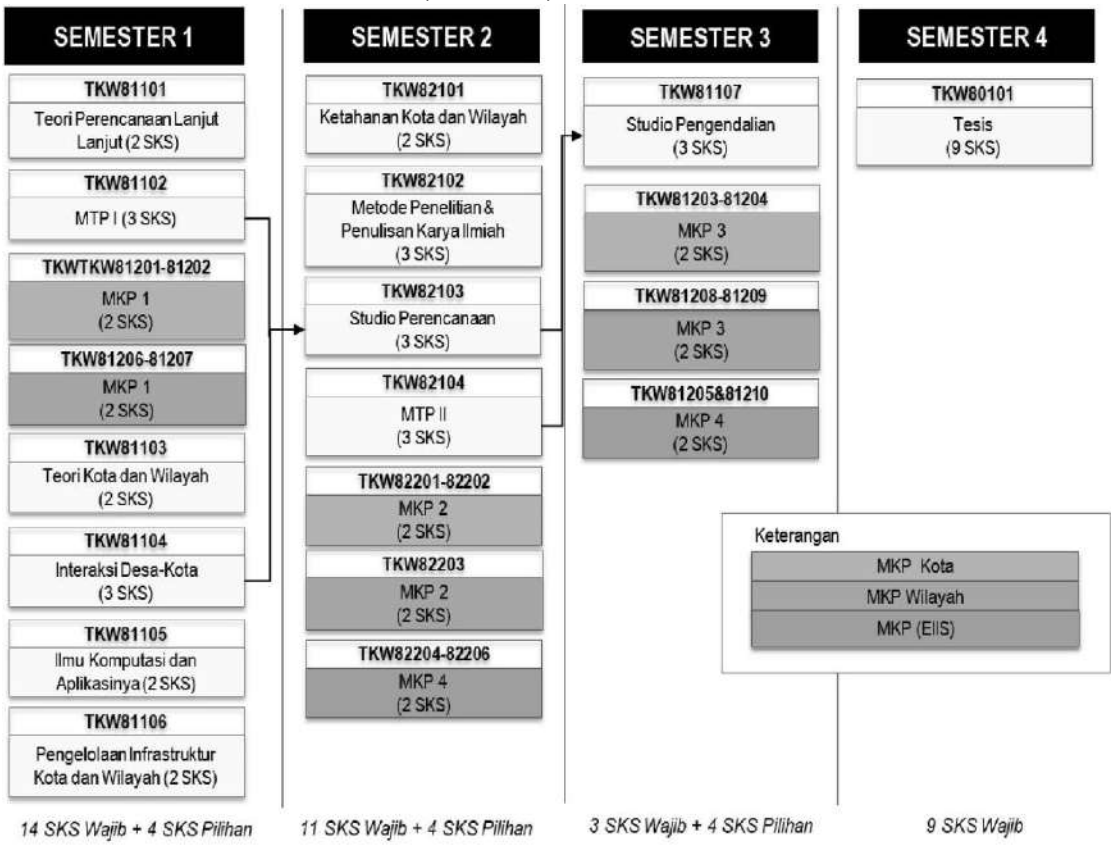
1. Develop logical, critical, systematic, and creative thinking through scientific research, design creation, or artistic works in the field of science and technology that consider and apply humanities values according to their area of expertise; formulate scientific concepts and study results based on scientific principles, procedures, and ethics in the form of a

thesis or equivalent, uploaded on the university's website, and papers published in accredited scientific journals or accepted in international journals.
2. Conduct academic validation or studies in their field of expertise to solve relevant problems in society or industry by developing their knowledge and expertise.
3. Formulate ideas, thoughts, and scientific arguments responsibly and ethically, and communicate them through media to the academic community and the wider society.
4. Identify scientific fields for research purposes and position them within a research map developed through an interdisciplinary or multidisciplinary approach.
5. Make decisions in the context of solving the development of science and technology problems that consider and apply humanities values based on analytical or experimental studies of information and data.
6. Manage, develop, and maintain networks with colleagues, peers within institutions, and the broader research community.
7. Enhance self-learning capacity.
8. Document, store, secure, and retrieve research data to ensure its validity and prevent plagiarism.
9. Adapt, collaborate, create, contribute, and innovate in applying knowledge in community life and act as globally-minded citizens.
10. Uphold academic integrity in general and prevent plagiarism.
11. Utilize information technology in the context of scientific development and the implementation of expertise.
12. Use at least one international language for oral and written communication.

Specialized Skills Competencies Expected from Graduates of the Master's Program in PWK:

1. Apply theories, systems, processes, and methods of urban and regional planning and development to solve problems in this field by utilizing other disciplines in an interdisciplinary or multidisciplinary manner, considering spatial, economic, socio-cultural, environmental, and institutional factors.
2. Conduct in-depth or extensive studies in urban and regional planning and development to contribute original and tested insights through research with an interdisciplinary or multidisciplinary approach.
3. Formulate thoughts and ideas from research results for the development of science and technology in urban and regional planning and development.
4. Critically assess and provide recommendations from the perspective of urban and regional planning and development regarding policies or solutions that have been or are being implemented, presented in the form of scientific papers.

4. ACADEMIC CURRICULUM FOR THE MASTER'S PROGRAM IN URBAN AND REGIONAL PLANNING (S2 PWK) 2019-2020 - 2023-2024



4.1 List of Courses

The Master's Program (S-2) in Urban and regional planning (PWK) will conduct educational activities with a total of at least 47 credits over a study period of 2 years, consisting of 4 (four) semesters. The maximum study period is 8 semesters (4 years).

The total number of credits for mandatory courses is 26 credits, derived from 10 courses, while the number of credits for elective courses is 12 credits, derived from 6 courses. The names and credit values of each offered course are shown in the following table.

COMPULSORY COURSES OF MASTER'S PROGRAM IN URBAN AND REGIONAL PLANNING (PWK)

Course Code	Course	Credit	Semester
(1)	(2)	(3)	(4)
TKW81101	Advanced Planning Theory	2	1
TKW81102	Planning Engineering Methods I	3	1

TKW81103	City and Region Theory	2	1
TKW81104	Village-City Interaction	3	1
TKW81106	City and Regional Infrastructure Management	3	1
TKW81107	Management Studio	3	3
TKW82101	City and Regional Resilience	2	2
TKW82102	Research Methodology and Scientific Paper Writing	3	2
TKW82103	Planning Studio	3	2
TKW82104	Planning Engineering Method II	3	2
TKW80101	Master's Thesis	9	4
	Total Credits	**35**	

Elective Courses of Master's Program (S-2) in Urban and Regional Planning (PWK)

Course Code	Course	Credit	Semester
(1)	**(2)**	**(3)**	**(4)**
TKW81201	MKP 1 : Settlement Management	2	1
TKW81201	MKP 1 : Settlement Management	2	1
TKW81202	MKP 1 : Landscape and Ecology	2	1
TKW81203	MKP 3 : City Rejuvenation	2	3
TKW81204	MKP 3 : Remote Sensing and Information System	2	3
TKW81205	MKP 4 : Green Economy	2	3
TKW81206	MKP 1 : Job Networks and Social Capital	2	1
TKW81207	MKP 1 : Disaster Mitigation and Adaptation	2	1
TKW81208	MKP 3 : Sustainable Rural Development	2	3
TKW81209	MKP 3 : Strategic Area Planning	2	3
TKW81210	MKP 4 : Green Infrastructure	2	3
TKW81211	MKP5 : Computational Science and its Applications	2	1
TKW82201	MKP 2 : Sustainable Design	2	2
TKW82202	MKP 2 : Community-Based Engineering	2	2
TKW82203	MKP 2 : Poverty and Social Security	2	2
TKW82204	MKP 4 : Integration of Land Use and Transportation	2	2
TKW82205	MKP 4 : Sustainable Environmental Management	2	2
TKW82206	MKP 4 : Humanitarian Logistics Management	2	2

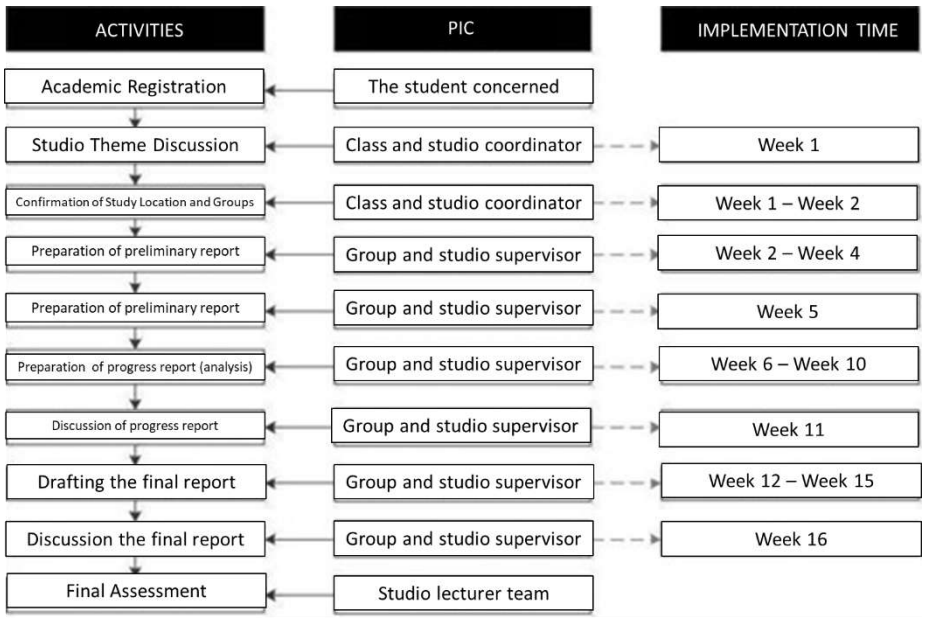
* Elective courses (MKP) that can be chosen by students are offered each semester and contribute to the credits required for graduation

4.1.1 Studio Courses

The Master's Program (S-2) in Urban and Regional Planning has 2 compulsory studio courses for each specialization, which are:
a. Planning Studio;
b. Management Studio.

The provisions for conducting Studio Courses are as follows:

- Planning Studio (TKW82103) must be taken in the second semester, while Management Studio (TKW81107) must be taken in the third semester.
- The prerequisite courses for students to enroll in Planning Studio are Planning Engineering Methods 1 (TKW81102**)** and Rural-Urban Interaction (TKW81104) with a minimum grade of C.
- The prerequisite course for students to enroll in Control Studio (TKW81107) is Planning Engineering Methods 2 (TKW82104) with a minimum grade of C



Studio Flowchart of Master's Program (S-2) PWK, Faculty of Engineering UB

4.1.2 Elective Courses

The Master's Program (S-2) in Urban and Regional Planning offers 16 elective courses, which are available in either the odd or even semesters. Students are required to complete a

minimum of 12 credits from these elective courses. The selection of elective courses is governed by the following rules:

- Students must take 4 credits from elective courses offered in Group 1 during the 1st semester.
- Students must take 4 credits from elective courses offered in Groups 2 and 4 during the 2nd semester.
- Students must take 4 credits from elective courses offered in Groups 3 and 4 during the 3rd semester.
- Students are allowed to take additional elective courses beyond the required 4 credits in the relevant semester, provided they meet the minimum GPA requirements and it does not interfere with their coursework in the semester in which they are enrolled.

4.2 Learning Components

The learning components in the Master's Program in Urban and Regional Planning (MPWK) consist of three main parts: foundation, pillars, and roof. The foundation consists of courses that equip students with concepts, spatial understanding, and research methods used in the field of Urban and Regional Planning. These courses are designed to provide the basic competencies of a planner and accommodate students from various disciplines.

The three main pillars of the learning components include courses that provide the core competencies of a planner. The first pillar consists of courses that deliver the core expertise of the Master's Program in Urban and regional planning at Faculty of Engineering UB, focusing on Rural-Urban Interaction. The second pillar consists of courses that enhance core expertise in line with the latest developments in the field of Urban and regional planning. The third pillar equips students with the ability to solve problems using a learning-by-doing approach in specific case studies. The roof of the learning components is the synthesis of the knowledge in Urban and regional planning built upon the two foundational components below.

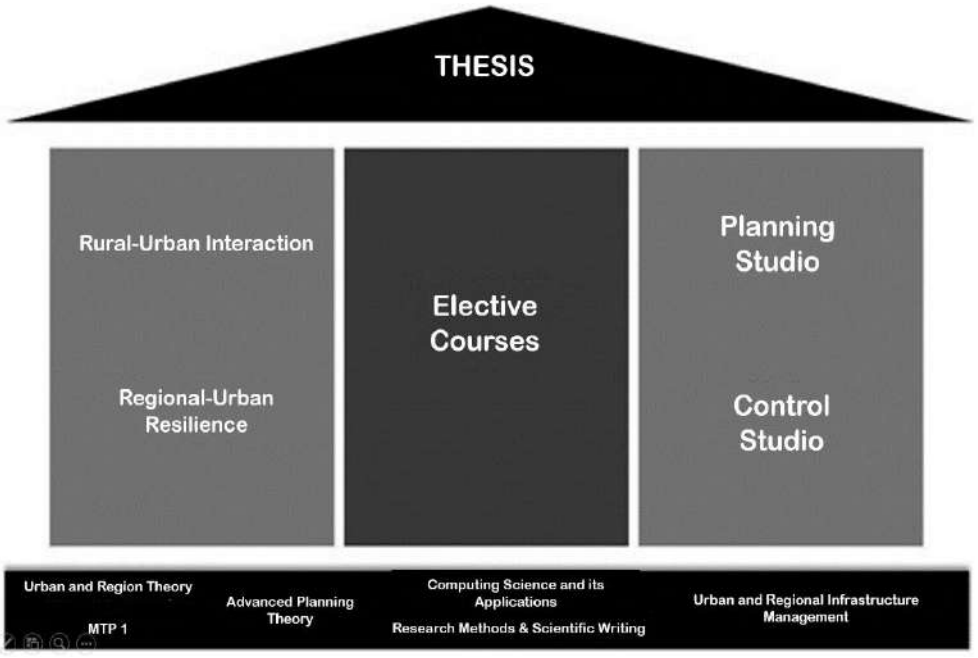


Diagram of Learning Components for the Master's Program (S-2) in Urban and Regional Planning (PWK)

5. REGULATIONS FOR THE MASTER'S PROGRAM (S2) IN URBAN AND REGIONAL PLANNING

The regulations in the Master's Program in Urban and Regional Planning at the Faculty of Engineering, Universitas Brawijaya, include rules related to studio courses, elective courses, thesis, midterm and final exams, assessment of academic progress and success, study load, and graduation (judicium).

5.1 Thesis

The thesis process is conducted in accordance with the rules of the university and faculty, with additional important points related to academic and administrative requirements as well as the thesis monitoring system, as follows:

a. The supervisor is assigned by the final project management team, while the examiner can be proposed by the student with the supervisor's approval and in consultation with the final project management team.
b. Proposal defense, result seminar, and final thesis defense are scheduled monthly during the current semester.
c. The thesis process (from proposal to final report) is carried out using a logbook (progress report), control sheet, and supervisor approval form.
d. Students must have completed all courses (40 credits) and passed with a minimum grade of C.
e. Students must follow the stages in the thesis monitoring system as detailed in the Thesis Implementation Guidelines.
f. The thesis grade is an accumulation of the grades from the proposal defense, result seminar, and final thesis defense.
g. Students are eligible to take the proposal defense if:

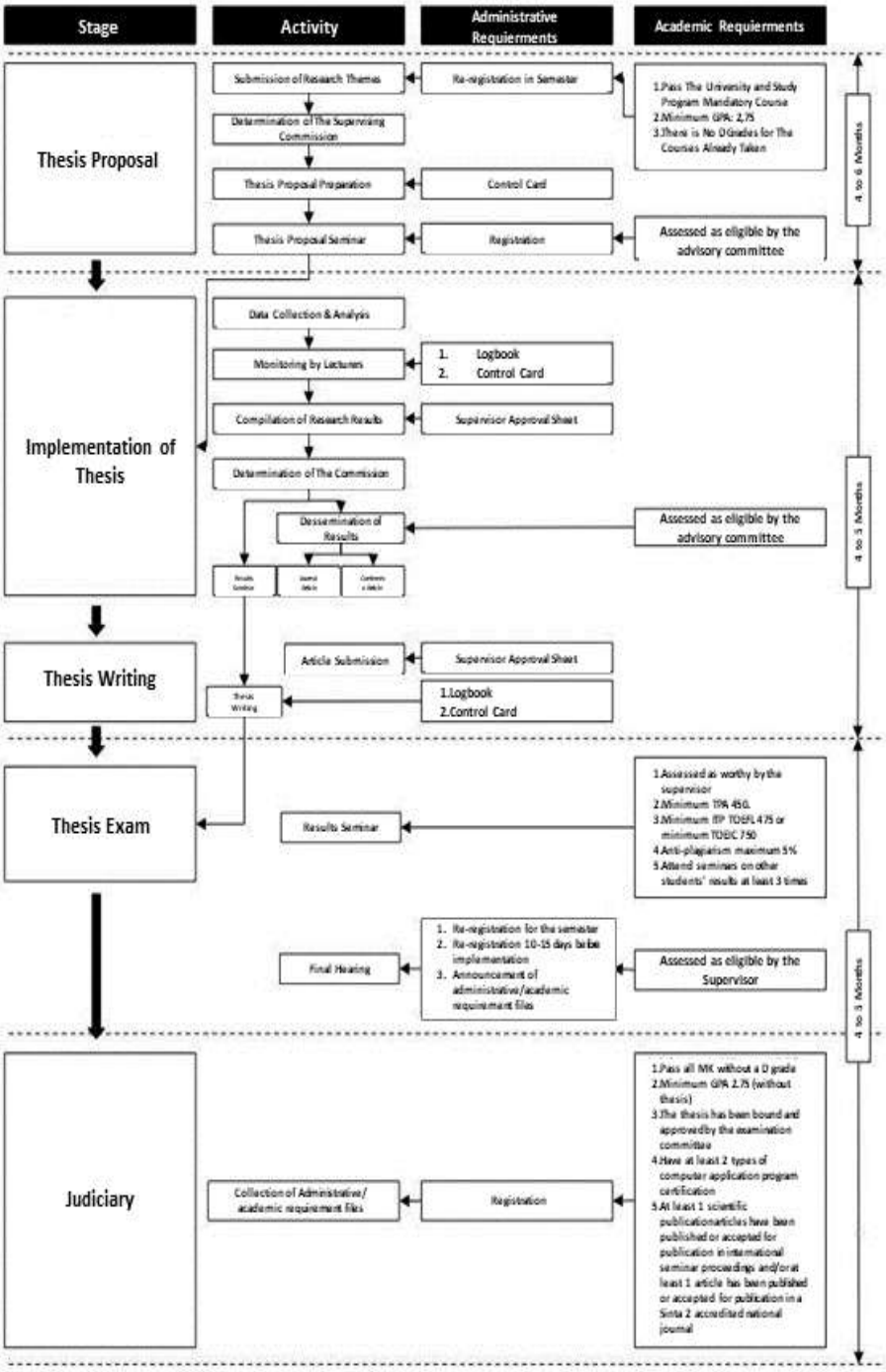
- They have passed the compulsory university and program courses;
- They have a minimum GPA of 2.75;
- They have no grade of D in any taken courses;
- They are deemed eligible by the supervisory committee.

h. Students are eligible to take the result seminar if:
- Approved by the supervisor;
- They have a TPA certificate with a minimum score of 450 (Oto-Bappenas) and a TOEFL-ITP certificate with a minimum score of 475 or TOEIC with a minimum score of 750, valid for a maximum of 2 years;
- They meet the anti-plagiarism requirement with a maximum similarity index of 5%;
- They have attended at least 3 result seminars of other students.

i. Students are eligible to take the final thesis defense if:
- They are deemed eligible by the supervisor.

j. The graduation (judicium) is conducted after the student has completed all academic and administrative requirements, in accordance with the program, faculty, or university regulations. The additional requirements for participating in the judicium, apart from those of the faculty or university, are as follows:

- Passing all courses with no grade of D;
- A minimum GPA of 2.75 (excluding the thesis);
- Possessing a certificate as a presenter in an international seminar or an equivalent activity, such as a summer school, international field study, or short course;



- Having at least one scientific publication that is part of the thesis, published and accessible online in a National Scientific Journal accredited by Sinta 3 or an international journal registered with BAN PT or a journal recommended by the university;
- Possessing certification in at least 2 computer application programs, valid for a maximum of 2 years;
- The thesis has been bound and approved by the Examination Committee.

Thesis Implementation Flowchart for the Master's Program (S-2) in Urban and Regional Planning at FT-UB

5.2 Exam Administration

a. The Midterm Exam (UTS) and Final Exam (UAS) for the Master's Program (S-2) in Urban and Regional Planning are organized by the Examination Committee, which is formed by the Department of PWK Management, and their implementation is aligned with the Academic Calendar of Universitas Brawijaya.
b. The requirement to take the UAS is a minimum attendance of 80% in the lectures, with a minimum of 14 meetings/sessions.
c. The administration of special exams and remedial exams for the Master's Program (S-2) in PWK, along with the conditions, is determined by the Program Management.

5.3 Assessment of Academic Progress and Achievement

The regulations regarding the assessment of students' academic progress and achievement are outlined in the following table.

Study Achievement Evaluation

End of Year	Number of Passed Credits	GPA
1	33 (without an E)	≥2.75
	< 33	<2.75
	The best 33 credits (without an E) with GPA ≥ 2,75	
4	≥ 40 (without an E)	≥2.75
	< 40	<2.75
	The best 40 credits (without an E) with GPA ≥ 2.75	
If students cannot meet these requirements by the end of the fourth year, they will be dismissed from the Master's Program in Urban and Regional Planning PS at the Faculty of Engineering Universitas Brawijaya (FT UB)		

At the end of the first year, students must accumulate at least 33 credits (without an E grade) with a GPA of ≥ 2.75. By the end of the second year, students must have accumulated at least 40 credits (without an E grade) with a GPA of ≥ 2.75. If students cannot meet these requirements, for example, if by the end of the first year they have only earned 24 credits

without an E grade or have a GPA of 1.80, they will be dismissed from the Master's Program (S-2) in Urban and Regional Planning at the Faculty of Engineering, UB. In the 4th semester, students are considered to have graduated if they have completed all courses and the thesis with a total of 49 credits (without an E grade) with a GPA of ≥ 2.75 and have met other requirements such as completing the thesis, academic assignments, passing the final thesis defense, fulfilling administrative requirements, and obtaining the certificates and publications as mentioned in section 5.1.

The success of students' studies is reflected in the grades for each course, which are converted into semester and cumulative GPAs. Upon graduation, students will receive a graduation distinction, which may include honors (cum laude), very satisfactory, or satisfactory, based on their GPA and study duration. The cum laude distinction is awarded based on faculty regulations.

5.4 Lecture Implementation

Lectures in the Master's Program (S-2) in Urban and Regional Planning (PWK) are conducted in two classes, where students choose one of the following:

A. General Class (Regular)

- General student requirements: The general class is open to the public with an undergraduate background that aligns with the comprehensive field of spatial planning, including but not limited to Urban and Regional Planning, Civil Engineering - Transportation, Architecture, Development Economics, Agriculture, and Public Administration.
- Specific student requirements for participating in the result seminar exam: Students must have a TPA certificate with a minimum score of 450 (Oto-Bappenas) and a TOEFL ITP (PBT) certificate with a minimum score of 475 or a TOEIC with a minimum score of 500, valid for up to 2 years.
- General lecture schedule: Generally, lectures are held from Monday to Friday, and the schedule will be further arranged by the MPWK program management.

B. Special Class (Regular 2)

- General student requirements: The special class is open to those currently working in institutions/agencies (government or private) involved in spatial planning or regional/national development and who have been employed for at least 2 years since being accepted into the institution/agency.
- Specific student requirements for participating in the result seminar exam: Students must have a TPA certificate with a minimum score of 425 (Oto-Bappenas) and a TOEFL ITP (PBT) certificate with a minimum score of 400 or a TOEIC with a minimum score of 350, valid for up to 2 years.
- General lecture schedule: Generally, lectures are held on Fridays and Saturdays, and the schedule will be further arranged by the MPWK program management.

5.5 Lecture Implementation During the Covid-19 Pandemic

During the Covid-19 pandemic, the Master's Program (S-2) in Urban and Regional Planning (PWK) applies health protocols that must be followed by students, lecturers, and educational staff. The application of these health protocols includes the use of media for lectures, attendance, and the implementation of proposal and thesis exams, applicable to both general and special classes.

- Lecture and assistance media: Lectures are conducted entirely online, both synchronously and asynchronously, using media such as video conferencing, VLM2, Google Classroom, and other relevant media. During the Covid-19 pandemic, assistance with assignments, proposals, and theses is recommended to be conducted online using video conferencing, Google Classroom, or other media as agreed upon between the supervisor and the student.
- Lecture attendance for students is recorded using Gapura Mobile, SIAM, or SIADO.
- Proposal and thesis exams are conducted entirely online (synchronously) using video conferencing media.
- Others: Lecturers and students are expected to follow health protocols as recommended by the Indonesian Ministry of Health or local government when conducting research surveys and other field assignments.

5.6 Awards for Non-Academic Achievements of Students

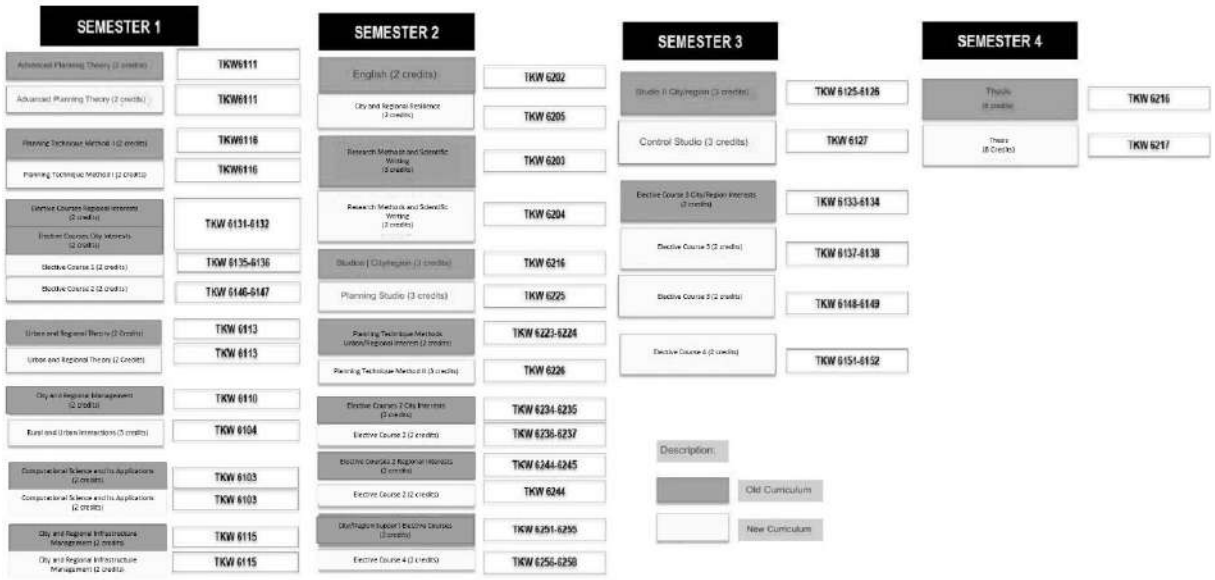
a. Non-academic achievements are obtained by students through activities organized outside the regular coursework of the Master's Program (S-2) in Urban and Regional Planning (PWK).
b. Students who achieve non-academic recognition will receive an A grade for their thesis, with the obligation to complete the thesis book and present the thesis research results.
c. A student is considered to have non-academic achievements if they meet one of the following criteria:

    - Receiving an award as the best presenter at an international seminar held abroad. The student must present a paper co-authored with the thesis supervisor, where the thesis supervisor is the main or co-author.
    - Receiving an award as a winner (1st, 2nd, 3rd place, or honorable mention) in an international spatial planning or area design competition. Participation in international competitions must be approved by the Head of the Master's Program (S-2) in PWK and supervised by one of the lecturers of the Master's Program (S-2) in PWK.
    - Publishing the thesis in an international journal with at least a Scopus Q4 reputation, where the thesis supervisor is the main or co-author. The acceptance statement from the publisher must be received before the graduation ceremony (Judicium).
    - Receiving an award at an international dissemination event or international conference in the field of spatial planning or sustainability (Sustainable Development Goals) organized by a reputable international institution.

6. TRANSITIONAL REGULATIONS

The transition is aimed at implementing changes/adaptations from the old curriculum to the new curriculum that will be applied to students in the Master's Program (S-2) in Urban and Regional Planning (PWK), following these procedures:

1. The new curriculum transition applies to new students and those who have not yet started their thesis (when the curriculum is implemented).
2. The process of transitioning from the old curriculum to the new curriculum is as explained in the *Inpassing* Diagram.
3. Students who have not taken new courses listed in the new curriculum are required to take those courses in the following semester.
4. Grade improvement by retaking courses refers to the name and number of credits of the new courses.



Inpassing Diagram of Master's Program (S-2) in Urban and Regional Planning

7. COURSE SYLLABI

A. COMPULSORY COURSES

Course: Urban and Regional Infrastructure Management
Code: TKW81106
Credits: 2 credits
Prerequisite: None
Main Topics: This course covers topics on infrastructure management, waste management, water infrastructure asset management, public transport infrastructure, and water infrastructure.

References:

- Nicholas P. Cheremisinoff. 2003. *Elsevier Inc*, *Handbook of Solid Waste Management and Waste Minimization Technologies*.
- Carlos, F. Dagando. 2010. *Public Transportation Systems: Basic Principles of System Design, Operations Planning and Real-Time Control*, ITS Berkeley.
- Mayor, Richard M. 2007. *Street and Site Plan Design Standards*, Chicago Department of Transportation.
- Nelson, Valerie. I. 2008. *Sustainable Infrastructure Management*. The Government of the Hong Kong Special Administrative Region. 2004. *Port Works Design Manual Part – 2*. Civil Engineering Office Homantin, Kowloon, Hong Kong.
- Jasa Marga. 2015. *Mewujudkan Infrastruktur untuk Mempercepat Pertumbuhan Ekonomi Nasional*. Annual Report 2015.
- PT Waskita Karya. 2015. *Terdepan Membangun Infrastruktur untuk Negeri*. Annual Report.
- PT Penjaminan Mutu Indonesia. 2016. *Acuan Lokasi Resiko Kerjasama Pemerintah dengan Badan Usaha*.
- Media. 2015. *Kekayaan Negara PEMBANGUNAN INFRASTRUKTUR SEGERA*. Edition No. 20 Year VI/2015.

Course: Computational Science and Its Applications
Code: TKW81105
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses the use of advanced remote sensing technology and GIS. It covers programs for solving spatial problems, land classification and GIS, remote sensing, land change and analytical techniques, and knowledge of geographic information systems.

References:

- Aronoff, S. 1989. *Geographic Information System – A Management Perspective*, WDL Publications, Ottawa.
- Burrough, P.A. 1986. *Principles of Geographical Information System for Land Resources Assessment*, Butler & Tanner Ltd., London.
- DeMers, M.N. 1997. *Fundamentals of Geographic Information System*, John Wiley & Sons, Inc., New York.
- ESRI (Environmental System Research Institute, Inc). 1996. *ArcView GIS, The Geographic Information System for Everyone*, ESRI, New York.
- Prahasta, E. 2001. *Konsep – konsep Dasar Sistem Informasi Geografis*, Penerbit Informatika, Bandung.

Course: Village-City Interaction
Code: TKW81104
Credits: 3 credits
Prerequisite: None
Main Topics: This course explores the complex relationship between urban and rural areas. The

relationship includes both spatial and non-spatial (socio-economic) aspects related to sustainable development with the primary goal of improving welfare.

References:

- Cecilia Tacoli, *Environment and Urbanization*, Vol. 10, No. 1, April 1998.
- Goran & Salivsjacka, *Some Aspects of Rural and Urban Interdependence: Economic-Geographical View*, RJOAS, 1(61), January 2017. DOI https://doi.org/10.18551/rjoas.2017-01.03.
- Florian Steinberg, *Rural–Urban Linkages: An Urban Perspective*. Document No. 128. Working Group: Development with Territorial Cohesion. October 2014.
- Vincent L. Rotagé, *Rural-Urban Integration in Java*, Routledge, London, 23 May 2019.
- OECD (2013), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, OECD Publishing. http://dx.doi.org/10.1787/9789264204812-en.
- *An Integrated Approach to Rural Development*https://www.un.org/en/ecosoc/docs/pdfs/an_integrated_approach_to_rural_development.pdf.

Course: Planning Engineering Methods I
Code: TKW81102
Credits: 3 credits
Prerequisite: None
Main Topics: This course is a prerequisite for studio courses. The material provided relates to the methods that will be used in the planning studio and serves as a foundation for students in selecting the methods they will use in writing their thesis. Topics include Spatial Model Dynamics, Spatial Analysis, Spatial Statistics, Univariate Analysis, Livelihood Analysis, and Additive Ratio Assessment.

References:

- John Scott. 2000. *Social Network Analysis: A Handbook*. Second Edition. SAGE Publications.
- Matthew Denny. 2014. *Social Network Analysis*, Institute for Social Science Research, University of Massachusetts Amherst.
- Wassermann, S. & Faust, K. 2012. *Social Network Analysis: Methods and Applications*. Cambridge University Press. Online ISBN 9780511815478.
- Coleman, J. 1990. *Foundations of Social Capital*. Harvard University Press, USA.
- Robert D. Putnam. 2000. *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster Paperbacks, Rockefeller Center, New York 10020.
- UNHDP. http://hdr.undp.org/en/content/
- Sullivan, et.al. 2003. *The Water Poverty Index: Development and Application at the Community Scale*. Natural Resources Forum 27 (2003) 189–199.
- Sabina Alkire and Maria Emma Santos. 2010. *Multidimensional Poverty Index*. Oxford Poverty & Development Index (OPHI).
- John W. Creswell. 2015. *Penelitian Kualitatif dan Desain Riset: Memilih di antara Lima Pendekatan*. Pustaka Pelajar Yogyakarta.
- Sugiono. 2011. *Metode Penelitian Kombinasi*. Alfabeta Bandung.
- W. Lawrence Neuman. 2013. *Metode Penelitian Sosial: Pendekatan Kualitatif dan Kuantitatif*. Indeks Jakarta.

- Norman K. Denzin and Yvonna S. Lincoln. 2009. *Handbook of Qualitative Research*. Pustaka Pelajar.
- Singgih Santoso. 2014. *Statistik Non Parametrik*. PT Elex Media Komputindo, Jakarta.
- Singgih Santoso. 2014. *Statistik Parametrik*. PT Elex Media Komputindo, Jakarta.
- George A. Morgan, et.al. 2004. *SPSS for Introductory Statistics*. Lawrence Erlbaum Associates Inc., New Jersey.

Course: City and Region Theory
Code: TKW81103
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses the development of urban and regional theory. Case studies and best practices in the application of these theories are also covered in discussions. Topics include the evaluation of urban and regional theories, urban development theory, regional development issues, top-down development, bottom-up development, and regional economic paradigms.

References:

- Adedipe, B.O. *First Foundation of Regional Planning*.
- Agrawal, A.N., and Kundan, Lal. 1980. *Economic Planning Principles, Techniques, and Practices*. Vikas Publications House Limited, India.
- Faniran, A. 1984. *Urban and Regional Planning Policy Formulation in Developing Countries*. University of Ibadan Publishing House, Ibadan.
- Glasson, J. 1974. *An Introduction to Regional Planning: Concepts, Theory, and Practice*. 2nd Edition. Hutchinson and Company Publishers Limited, 3 Fitzroy Square, London W1P 6.
- Hainess-Young, R., Barr, C.J., Firbank, L.G, Furse, M., Howard, D.C., McGowan, G., Petit, S., Smart, S.M., Watkins, J.W. 2003. *Changing Landscapes, Habitats and Vegetation Diversity Across Great Britain*. Journal of Environmental Management 67, 267-281.
- Hall, P. 1974. *Urban and Regional Planning*. Penguin Harmondsworth.
- Archibugi, F. 2008. *Planning Theory: From the Political Debate to the Methodological Reconstruction*. Springer.
- Friedmann, J. 2011. *Insurgencies: Essays in Planning Theory*. RTPI Library Series, Taylor & Francis.
- Fainstein, S.S., DeFilippis, J. 2012. *Readings in Planning Theory* (4th ed.), Wiley-Blackwell.

Course: Advanced Planning Theory
Code: TKW81101
Credits: 2 credits
Prerequisite: None
Main Topics: This course covers the theories and processes of planning, as well as the concepts behind the planning theories that have developed in both Western and Eastern countries. Topics

include planning paradigms, planning syntagma, planning methodology, control in planning, planning models, and planning ethics.

References:

- Barry, Brian W. 1997. *Strategic Planning Workbook*. Wilder Foundation, Minnesota.
- Blowers, Hamnett, Sarre (ed). 1974. *The Future of Cities*. Hutchinson Educational.
- Branch, Melville C. 1998. *Comprehensive Planning for the 21st Century: General Theory and Principles*. Praeger, London.
- Branch, Melville C. 1995. *Perencanaan Kota Komprehensif*. Gadjah Mada University Press, Yogyakarta.
- Campbell, Scott, and Fainstein, Susan. 2003. *Readings in Planning Theory*. Blackwell Publishing.
- Faludi, Andreas. 1973. *A Reader in Planning Theory*. Pergamon Press.
- Friedmann, John. 1987. *Planning in the Public Domain: From Knowledge to Action*. Princeton University Press, Princeton.
- Hiedemann, Claus. 1992. *Planning Theory*. Institute for Regional Planning/Science, University of Karlsruhe.
- Leonard Goodstein, Timothy Nolan, William Pfeiffer. 1993. *Applied Strategic Planning: A Comprehensive Guide*. McGraw-Hill Inc.

Course: City and Regional Resilience
Code: TKW82101
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses the definition of resilience, its stages and processes, as well as policies and efforts to enhance urban resilience.

References:

- Vale, Lawrence J., and Thomas J. Campanella (editors). 2005. *The Resilient City: How Modern Cities Recover from Disaster*. Oxford University Press, NY.
- Grazia Brunetta, Ombretta Caldarice, Nicola Tollin, Marti Rosas-Casals, Jordi Morató. 2019. *Urban Resilience for Risk and Adaptation Governance [1st ed.]*. Springer International Publishing.
- Lance Jay Brown, David Dixon. 2014. *Urban Design for an Urban Century: Shaping More Livable, Equitable, and Resilient Cities*, 2nd edition. Wiley, New Jersey.
- Neeraj Prasad, Federica Ranghieri, Fatima Shah Zoe Trohanis, Earl Kessler, Ravi Sinha. 2009. *Climate Resilient Cities*. The World Bank, Washington DC.
- City of Vancouver. 2017. *Preliminary Resilience Assessment*. City of Vancouver.
- Urban Land Institute. 2015. *Building the Resilient City: A ULI Conference Report*. ULI, Washington DC.
- Patricia Romero-Lankao, Daniel M. Gnatz, Olga Wilhelmi, and Mary Hayden. 2016. *Urban Sustainability and Resilience: From Theory to Practice*. Sustainability 2016 vol 8, 1224.

Course: Research Methodology and Scientific Paper Writing
Code: TKW82102
Credits: 3 credits
Prerequisite: None
Main Topics: This course covers an overview of the systematic and organized scientific process or methods to obtain data and the methodologies that will be used to answer research questions.

References:

- J. Taylor, Steven, Bogdan Robert, DeVault Marjorie L. 2016. *Introduction to Qualitative Research Methods*. John Wiley & Sons, Inc., Hoboken, New Jersey.
- Leavy, Patricia. 2017. *Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based*. Guilford Press, New York.
- Thomas R. Knapp. 2016. *An Unpublished Quantitative Research Methods Book*.
- Cresswell, John W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage, Los Angeles.
- Neuman, W. Lawrence. 2014. *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson Education Limited.
- Jenkins-Smith, Hank C. 2017. *Quantitative Research Methods for Political Science, Public Policy and Public Administration: 3rd Edition*. University Libraries, Oklahoma.
- King, Gary. 2014. *Advanced Quantitative Research Methodology*.
- Barker, Chris. 2005. *Cultural Studies: Theory and Practice*. London: Sage Publications.
- Blaikie, Norman. 2009. *Designing Social Research*. Polity.
- Booth, Andrew, Diana Papaioannou, and Anthea Sutton. 2012. *Systematic Approaches to a Successful Literature Review*. California: Sage Publications.
- Fossey, Ellie, Carol Harvey, Fiona McDermott, and Larry Davidson. 2002. "Understanding and Evaluating Qualitative Research." *Australian and New Zealand Journal of Psychiatry* 36 (6): 717–32. https://doi.org/10.1046/j.1440-1614.2002.01100.x.
- Gillham, Bill. 2000. *Case Study Research Methods*. London: Continuum.
- McLellan, Eleanor, Kathleen M. MacQueen, and Judith Neidig. 2003. "Beyond the Qualitative Interview: Data Preparation and Transcription." *Field Methods* 15 (1): 63–84. https://doi.org/10.1177/1525822X02239573.
- Ritchie, Jane, Jane Lewis, Carol McNaughton Nicholls, and Rachel Ormston. 2013. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. Sage.
- Saldana, Johnny. 2013. *The Coding Manual for Qualitative Researchers*. Second Edition. Sage Publications.
- Guba, E.G., and Yvonna L.S., 1985. *Naturalistic Inquiry*. SAGE Publications, Inc., California.
- Guba, E.G., 1990. *The Paradigm Dialog*. SAGE Publications, Inc., California.
- Haider, Kh., 2008. *Hermeneutics and Dialectics: Hegel, Husserl, Heidegger and Hans-George Gadamer*, Munich Personal RePEc Archive Paper No. 8429. http://mpra.ub.uni-muenchen.de, accessed on December 24, 2008, at 19:33 WIB.
- Ihalauw, J.J.O.I., 2004. *Bangunan Teori*. Satya Wacana University Press, Salatiga.

- Kuhn, T., 1996. *The Structure of Scientific Revolutions*. 3rd ed., The University of Chicago Press, Chicago.
- Leech, G., 2003. *Semantik*. Pustaka Pelajar, Yogyakarta.
- Lesser, E.L., 2000. *Knowledge and Social Capital: Foundations and Applications*. Butterworth-Heinemann, New Delhi.
- Moleong, L.P., 1998. *Metode Penelitian Kualitatif*. Remaja Rosdakarya, Bandung.
- Muhadjir, N., 2000. *Metodologi Penelitian Kualitatif*. Rake Sarasin, Yogyakarta.
- Palmer, R.E., 2005. *Hermeneutika: Teori Baru Mengenai Interpretasi*. Translated by Masnur Heri Damanhuri Muhammad, Pustaka Pelajar, Yogyakarta.
- Spiegelberg, H., 1960. *The Phenomenological Movement: A Historical Introduction*. The Hague, Netherlands.
- Spradley, J.P., 1980. *Participant Observation*. Holt, Rinehart and Winston, USA.
- Spradley, J.P., 1997. *Metode Etnografi*. Tiara Wacana, Yogyakarta.

Course: Planning Studio
Code: TKW82103
Credits: 3 credits
Prerequisites: Planning Engineering Methods I and City-Village Interaction
Main Topics (Regional): This course requires the prerequisite courses of Planning Engineering Methods I and City-Village Interaction. It covers strategic issues in urban development in Indonesia, participatory planning design, participatory approach research, field surveys, data compilation, and problem identification.

References:

- Jenkins, Paul, Harry Smith & Ya Ping Wang, 2007. *Planning and Housing in the Rapidly Urbanising World*. Routledge.
- Payne, Geoffrey & Michael Majale, 2004. *The Urban Housing Manual*. London: Earthscan.
- Tipple, A. Graham & Kenneth G. Willis, 2003. *Housing the Poor in the Developing World*. Routledge.
- Wang, Xinhao & Rainer vom Hofe, 2007. *Research Methods in Urban and Regional Planning*. Tsinghua University Press & Springer Verlag.
- Mike McKeever, 2007. *How to Write a Business Plan*.
- John M. Bryson, 2006. *Creating and Implementing Your Strategic Plan*. John Wiley & Sons, Inc., San Francisco.

Main Topics (Urban): This course simulates the process of preparing a Strategic Plan for a Region/Area with themes such as Agropolitan, Minapolitan, Tourism, Industry, or Mining. It includes Strategic Planning Processes and Methodologies, Outcome and Impact, Measurement and Accountability, Capital Assessment, and Allocation.

References:

- John M. Bryson. *Strategic Planning for Public and Nonprofit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement*. John Wiley & Sons, 2004.
- Robert G. Wittmann & Matthias P. Reuter. *Strategic Planning: How to Deliver Maximum Value through Effective Business Strategy*. Kogan Page Limited, 2008.
- Rudolf Grünig and Richard Kühn. *Process-based Strategic Planning*. Springer, 2006.
- John M. Bryson. Strategic Planning For Public And Nonprofit Organizations; A Guide to Strengthening and Sustaining Organizational Achievement. John Wiley & Sons. 2004.
- Robert G Wittmann & Matthias P Reuter. Strategic Planning; How to deliver maximum value through effective business strategy. Kogan Page Limited. 2008.
- Rudolf Griinig and Richard Kiihn, Process-based Strategic Planning, Springer. 2006

Course: Planning Engineering Methods II
Code: TKW82104
Credits: 3 credits
Prerequisite: None
Main Topics:
This course is a prerequisite for the control studio course. The material provided relates to the methods that will be used in the control studio and serves as a foundation for students in selecting the methods they will use in writing their thesis. Topics include the measurement of urban/regional hierarchy, poverty level measurement, social capital measurement using the 3-index SNA approach, research methods, historical and comparative approaches, aggregate regional & IO/SAM, SEM, AHP, and TOPSIS.

References:

- Wang, Xinhao & Rainer vom Hofe, 2007. *Research Methods in Urban and Regional Planning*. Tsinghua University Press & Springer-Verlag.
- Sanders, Lena, 2007. *Models in Spatial Analysis*. ISTE.
- Arbia, Guiseppe & Badi H. Baltagi, 2009. *Spatial Econometrics: Methods and Application*. Springer Physica Verlag.
- Oppenheim, Norbert. 1980. *Applied Models in Urban and Regional Analysis*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.
- Warpani, Suwardjoko. 1985. *Analisis Kota dan Daerah*. Bandung: ITB.
- Muta'ali, Lutfi. 2013. *Teknik Analisis Regional*. Yogyakarta: Badan Penerbit Fakultas Geografi UGM.
- Sitohang, Paul. 1977. *Pengantar Perencanaan Regional*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Nurzaman, Siti Sutriah. 2012. *Perencanaan Wilayah dalam Konteks Indonesia*. Bandung: Penerbit ITB.
- Safrizal. 2008. *Ekonomi Regional: Teori dan Aplikasi*. Padang: Baduose Media.
- Emilia dan Imelia. 2006. *Ekonomi Regional*. Fakultas Ekonomi Universitas Jambi. Unpublished.
- Tarigan, Robinson. 2006. *Perencanaan Pembangunan Wilayah*. Jakarta: Bumi Aksara.
- Adisasmita, Rahardjo. 2010. *Pembangunan Kawasan dan Tata Ruang*. Yogyakarta: Graha Ilmu.

- Khakee, A. 1998. *Evaluation and Planning: Inseparable Concepts*. Journal of Planning Review, Vol. 69, no. 4.
- Lichfield, N., Peter K., and Michael W. 1975. *Evaluation in the Planning Process*. Oxford: Pergamon Press.
- Patton, C., and David S. 1986. *Basic Methods of Policy Analysis and Planning*. Englewood Cliffs: Prentice-Hall.

Course: Management Studio
Code: TKW81107
Credits: 3 credits
Prerequisites: Planning Engineering Methods II and Planning Studio
Main Topics (Regional):
This course is offered in the 3rd semester as a mandatory course for the urban planning specialization. It has prerequisites of Planning Engineering Methods II and Planning Studio. The course discusses strategic issues in urban development in Indonesia, participatory planning design, participatory approach research, field surveys, data compilation, and problem identification.

References:

- Jenkins, Paul, Harry Smith & Ya Ping Wang. 2007. *Planning and Housing in the Rapidly Urbanising World*. Routledge.
- Payne, Geoffrey & Michael Majale. 2004. *The Urban Housing Manual*. London: Earthscan.
- Tipple, A. Graham & Kenneth G. Willis. 2003. *Housing the Poor in the Developing World*. Routledge.
- Wang, Xinhao & Rainer vom Hofe. 2007. *Research Methods in Urban and Regional Planning*. Tsinghua University Press & Springer Verlag.
- Mike McKeever. 2007. *How to Write a Business Plan*.
- John M. Bryson. 2006. *Creating and Implementing Your Strategic Plan*. John Wiley & Sons, Inc., San Francisco.

Main Topics (Urban):
This course simulates the process of developing a control mechanism (implementation) for a Regional/Area Plan along with appropriate control instruments. It includes Control Mechanisms, monitoring mechanisms, action plans (master plan, business plan), and action instruments.

References:

- Schönwandt, Walter L. *Planning in Crisis? Theoretical Orientations for Architecture and Planning*. Ashgate, 2005.
- Schnapper, Mel, and Rollins, Steven. *Value-based Metrics for Improving Results: An Enterprise Project Management Toolkit*. J. Ross Publishing, Inc., 2006.
- Daryanto. *Peraturan Perundang-Undangan di Indonesia: Konsep dan Teknik Pembentukannya Berbasis Good Legislation*. Deepublish, 2018.

- Joan E. Grusec, Paul D. Hastings. *Handbook of Socialization: Theory and Research*. The Guilford Press, 2007.
- Branch, Melville C. *Comprehensive Planning for The 21st Century: General Theory and Principles*. 1998. Praeger, London.
- Estrella, Marisol. *Learning from Change: Issues and Experiences in Participatory Monitoring and Evaluation*. Intermediate Technology Publications Ltd., 2000.
- Kementerian Pendidikan Nasional. *Pedoman Sosialisasi Prosedur Operasi Standar*. 2010.

B. ELECTIVE COURSES

Course: Green Infrastructure
Code: TKW81210
Credits: 2 credits
Prerequisite: None
Main Topics:
The Green Infrastructure course discusses the planning and design of green infrastructure to support urban and regional sustainability. The topics include green open spaces, green waste, green water resources, green energy, green buildings, green transportation, and green communities.

References:

- Timothy Dennis Youngquist. 2009. *What is Green Infrastructure? An Evaluation of Green Infrastructure Plans from Across the United States*. Iowa State University.
- Centre for Sustainable Planning and Environments. 2016. *Green Infrastructure*. UWE (University of West England).
- Hansen, R.; Rolf, W.; Rall, E.; Pauleit, S.; 2016. *Advance Urban Green Infrastructure Planning and Implementation: Innovative Approaches and Strategies from European Cities*. Green Surge.
- Rieke Hansen, Emily Rall, Stephan Pauleit, Werner Rolf, Sandra Fohlmeister, and Sabrina. *Urban Green Infrastructure Planning: A Guide for Practitioners*. Green Surge.
- 2015. *Green Infrastructure Action Plan for Pollinators in Southeast Wales*. TACP, England.
- Firehock, Karen. 2015. *Strategic Green Infrastructure Planning: A Multi-Scale Approach*. The Green Infrastructure Center Inc., Island Press, Washington.
- Mark Scott, Mick Lennon, Marcus Collier, Karen Foley. 2016. Integrating Ecosystem Approaches, Green Infrastructure and Spatial Planning. Environmental Protection Agency.
- Georgia Department of Natural Resources. 2015.Green Infrastructure Planning Guideline.

Course: Settlement Management
Code: TKW81201
Credits: 2 credits
Prerequisite: None

Main Topics:
This course discusses urban studies, urban resilience, and environment-based planning. It covers issues related to settlement development in Indonesia, characteristics of housing and settlements, concepts of housing supply and provision, physical environmental elements, social elements, and settlement development planning.

References:

- Jenkins, Paul, Harry Smith & Ya Ping Wang. 2007. *Planning and Housing in the Rapidly Urbanising World*. Routledge.
- Payne, Geoffrey & Michael Majale. 2004. *The Urban Housing Manual*. London: Earthscan.
- Tipple, A. Graham & Kenneth G. Willis. 2003. *Housing the Poor in the Developing World*. Routledge.

Course Name: Remote Sensing and Information Systems
Code: TKW81204
Credits: 2 credits
Prerequisite: None
Main Topics:
This course provides an understanding and analysis of spatial data through remote sensing image interpretation and digitization as a result of satellite recordings. It develops skills in implementing and applying these techniques so that students can use and analyze data in the form of a miniature representation model of the Earth's surface. This model can be manipulated, modeled, or analyzed, whether textually, spatially, or in combination, according to the needs.

References:

- Crampton, J.W. 2010. *Mapping: A Critical Introduction to Cartography and GIS (Critical Introduction to Geography)*. Wiley-Blackwell.
- Annoni, A., Craglia, M., Roo, A. D., San-Miguel, J., Konecny, M., Zlatanova, S., Bandrova, T.J. 2010. *Geographic Information and Cartography for Risk and Crisis Management: Towards Better Solutions*. Springer.
- Harmon, J.E., Anderson, S.J. 2003. *The Design and Implementation of Geographic Information Systems*. J Wiley.
- O'Sullivan, D., Unwin, D. 2002. *Geographic Information Analysis*. Wiley.
- Lillesand, Kiefer, Chipman. 2004. *Remote Sensing and Image Interpretation*, Fifth Edition. John Wiley & Sons, Inc, USA.
- Herold, M., Hemphill, J., Liu, X., Clarke, K.C. 2006. *Urban Patterns and Processes: A Remote Sensing Perspective*. 1st EARSeL Workshop of the SIG Urban Remote Sensing. Humboldt-Universität zu Berlin, Berlin.

Course: Green Economy
Code: TKW81205

Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses development activities, particularly in the economic sector, that are low or non-carbon dioxide emitting, environmentally friendly, resource-efficient, and socially equitable.

References:

- United Nations. 2012. *A Guidebook to the Green Economy*. Division for Sustainable Development, UNDESA.
- United Nations for Environmental Program. 2011. *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. UNEP.
- Cato, M.S. 2009. *Green Economics: An Introduction to Theory, Policy and Practice*. Earthscan, UK.

Course Name: City Rejuvenation
Code: TKW81203
Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses the development of heritage city preservation concepts and city rejuvenation worldwide, particularly in Indonesia, with three main focuses: 1) applying these concepts to preserve cultural and historical potentials, 2) developing the socio-economic potential of urban areas based on cultural and historical assets, and 3) strategies for improving the environmental and social quality of urban neighborhoods and marginalized areas.

References:

- Fitri, Isnen, Yahaya Ahmad, and Faizah Ahmad. 2015. "Conservation of Tangible Cultural Heritage in Indonesia: A Review of Current National Criteria for Assessing Heritage Value." Procedia-Social and Behavioral Sciences 184: 71–78. https://doi.org/10.1016/j.sbspro.2015.05.055.
- Graham, Brian, Gregory John Ashworth, and John E Tunbridge. 2000. *A Geography of Heritage: Power, Culture, and Economy*. Arnold; Oxford University Press.
- ICOMOS. 2004. *International Charters for Conservation and Restoration*. Paris: International Secretariat of ICOMOS.
- Loulanski, Tolina. 2006. "Revising the Concept for Cultural Heritage: The Argument for a Functional Approach." International Journal of Cultural Property 13 (2): 207. https://doi.org/10.1017/S0940739106060085.
- Siregar, Johannes Parlindungan. 2019. "The Ideological Meanings of Heritage: The Conflicting Symbols in Yogyakarta, Indonesia." DIMENSI (Journal of Architecture and Built Environment) 45 (2): 121–32. https://doi.org/10.9744/dimensi.45.2.121-132.
- Smith, Laurajane. 2006. *Uses of Heritage*. New York: Routledge.
- Smith, Stacie Nicole. 2016. "Consensus Building for Cultural Heritage Place Management." In *Consensus Building, Negotiation and Conflict Resolution for Heritage Place Management*, edited by David Myers, Stacie Nicole Smith, and Gail Ostergren, 24–64. California: The Getty Conservation Institute.

- Sonkoli, Gabor. 2017. *Historical Urban Landscape*. Budapest: Palgrave Macmillan. https://doi.org/10.1007/978-3-319-49166-0.

Course: Landscape and Ecology
Code: TKW81202
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses theories of ecology, environmental management, and their relation to landscape changes, particularly in urban landscapes. Specific ecological condition indicators are also introduced from the perspective of human perception (users). The course covers the socio-economic aspects of environmental management, ecology, and urban landscapes, human responses to ecological conditions, and the landscapes that shape them.

References:

- Australian Capital Territory Emergency Services Bureau, 1998. *Drought Factor Modelling*. Tech Note TN013. ACT Emergency Services Bureau, Curtin, Australia.
- Banks, P.B., 2004. *Population Viability Analysis in Urban Wildlife Management: Modelling Management Options for Sydney's Quarantined Bandicoots*. In: Lunney, D., Burgin, S. (Eds.), Urban Wildlife: More Than Meets the Eye. Royal Zoological Society of New South Wales, Sydney, Australia, pp. 70–77.
- D.L., Leslie, R.S., 2003. *Koala Mortality on Roads in South-East Queensland: The Koala Speed-Zone Trial*. Wildlife Research 30, 419–426.
- Fielding, A.H., Bell, J.F., 1997. *A Review of Methods for the Assessment of Prediction Errors in Conservation Presence/Absence Models*. Environmental Conservation 24, 38–49.
- Forman, R.T.T., Sperling, D., Bissonette, J.A., Clevenger, A.P., Cutshall, C.D., Dale, V.H., Fahrig, L., France, R., Goldman, C.R., Heanue, K., Jones, J.A., Swanson, F.J., Turrentine, T., Winter, T.C. (Eds.), 2003. *Road Ecology: Science and Solutions*. Island Press, Washington, USA.

Course: Job Networks and Social Capital
Code: TKW81206
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses an in-depth understanding of theories/concepts related to social networks and social capital that drive communities in social actions and collective behavior. It covers the paradigm of social networks, the foundation of actions and relationships within social networks, the structure of actions, types and forms of social capital, network terminology, and weak and strong ties within social networks

References:

✓ Coleman, JS. 1990. Foundations of Social Theory. The Belknap Press of Harvard University Press.
✓ Krackhardt, D. (1992). The strength of strong ties: The importance of philos in organizations. In N. Nohria and R. Eccles (eds.), Networks and organizations: Structure, form, and action (pp. 216-239). Boston, MA: Harvard Business School Press ✓ Scott, J. 2012. Social network analysis: A handbook. Chapter 1-2. London: Sage Publications.
- Coleman, JS. 1990. Foundations of Social Theory. The Belknap Press of Harvard University Press.
- Krackhardt, D. (1992). The strength of strong ties: The importance of philos in organizations. In N. Nohria and R. Eccles (eds.), Networks and organizations: Structure, form, and action. (pp. 216-239). Boston, MA: Harvard Business School Press.
- Scott, J. 2012. Social network analysis: A handbook. Chapter 1-2. London: Sage Publications.
- Wasserman, S., & Faust, K. (1994). Social network analysis: Methods and applications. Cambridge: Cambridge University Press.

Course Name: Disaster Mitigation and Adaptation
Code: TKW81207
Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses disaster risk reduction policies, disaster management, disaster risk reduction and spatial planning, the concept of disaster risk management, components in disaster risk calculation, hazard assessment, elements at risk, vulnerability assessment, capacity assessment, geoinformation technology in disasters, management systems for accessing geoinformation data, and the determination of evacuation routes and sites.

References:

- Alfred Olfert, Stefan Greifing, and Maria J. Batista. 2006. "Regional Multi-risk Review, Hazards Weighting, and Spatial Planning Response to Risk: Results from European Case Studies," in *Natural Affecting the Spatial Development of European Regions*, pp. 125-151.
- Bishop Ian D., Rabifard A., and Sutanta Heri. 2009. "An Integrating Approach for Disaster Risk Reduction using Spatial Planning and SDI Platform." Proceedings of the Surveying & Spatial Sciences Institute Biennial International Conference, Adelaide, 2009. Surveying & Spatial Sciences Institute, pp. 341-351.
- Burdy J. 1998. *Cooperating with Nature: Confronting Natural Hazards with Land Use Planning for Sustainable Communities*. Joseph Henry Press, USA.

Course Name: Sustainable Rural Development
Code: TKW81208
Credits: 2 credits
Prerequisite: None
Main Topics:
The Sustainable Rural Development course is provided to strengthen students' understanding of the importance of rural development within the context of sustainable development. The main

topics include the basic concepts of sustainable rural development, theories of sustainable rural development, sustainable rural industry development, and sustainable tourism development.

References:

- Edward Elgar. *Amenities and Rural Development: Theory, Method and Public Policy*. Cheltenham, UK.
- Cloke, Paul, et al. 2006. *Handbook of Rural Studies*. Sage Pub, London.
- United Nations, 1979. *Guidelines for Rural Centre Planning*, New York.
- Clifford Geertz. 1983. *Involusi Perdesaan: Proses Perubahan Ekonomi di Indonesia*. Translated by S. Supomo. Bhratara Karya Aksara, Jakarta.
- Karwan A. Salikin. 2003. *Sistem Perdesaan Berkelanjutan*. Kanisius, Yogyakarta.
- Syahyuti. 2006. *30 Konsep Penting dalam Pembangunan Pedesaan dan Perdesaan*. PT. Bina Rena Pariwara, Jakarta.

Course Name: Strategic Area Development
Code: TKW81209
Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses the fundamentals of strategic area planning and related aspects to accelerate the achievement of regional development targets. It also covers the policies that underlie the designation of strategic areas, as well as the criteria for strategic areas, both in general and specific, particularly for areas with unique typologies of interest based on spatial planning.

References:

- ✓ Rudiyanto,dkk., 2016,Kajian Telaah Kritis Penetapan Kawasan Strategis dalam Rencana Pembangunan Jangka Menengah Nasional (RPJMN) dan Rencana Tata Ruang Wilayah Nasional (RTRWN),Direktorat Tata Ruang dan Pertanahan – Badan Perencanaan Pembangunan Nasional,Hal : 2
- ✓ Direktorat tata Ruang dan Pertnahan. 2013. Perencanaan Tata Ruang Kawasan Strategis Nasional. Yinjaun Kebencanaan
- ✓ Fatmawati, Nurul Sri., 2016,Peluang Pemanfaatan Bandara Frans Kaisiepo Biak sebagai Aerospaceport di Indonesia, Dalam Kajian Kebijakan Penerbangan dan Antariksa, Editor Husni Nasution, dkk,In Media,Hal : 136

Course: Sustainable Design
Code: TKW82201
Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses the aspects of urban design and landscape and their connection to the social, cultural, economic, and community sustainability aspects.

References:

- Al-hagla, Khalid S. 2010. "Sustainable Urban Development in Historical Areas Using the Tourist Trail Approach." Cities 27 (4): 234–248. https://doi.org/10.1016/j.cities.2010.02.001.
- Beatley, Timothy. 2011. Biophilic Cities: Integrating Nature into Urban Design and Planning. Washington, USA: Island Press.
- Cooper, Rachel, Graeme Evans, and Christopher Boyko. 2009. Designing Sustainable Cities. Iowa: Blackwell.
- Dinep, Claudia, and Kristin Schwab. 2009. Sustainable Site Design: Criteria, Process, and Case Studies for Integrating Site and Region in Landscape Design. Wiley Blackwell.
- Jenks, Mike, and Colin Jones. 2010. Dimensions of the Sustainable City. New York: Springer.
- Karimi, Kayvan. 2012. "A Configurational Approach to Analytical Urban Design: 'Space Syntax'Methodology." Urban Design International 17 (4): 297–318. https://doi.org/https://doi.org/10.1057/udi.2012.19
- Kropf, Karl. 2017. The Handbook of Urban Morphology. West Sussex: John Wiley & Sons ltd.
- Martland, Carl D. 2012. Toward More Sustainable Infrastructure. John Wiley & Sons ltd.
- Newman, Peter, and Isabella Jennings. 2008. Cities as Sustainable Ecosystem. Washington, USA: Island Press.
- Roosa, Stephen A. 2010. Sustainable Development Handbook. Boca Raton: Taylor & Francis.
- Sarteì, S. Bry. 2010. Sustainable Infrastructure: The Guide to Green Engineering and Design. Canada: John Wiley & Sons ltd.
- Sustainable Development Solution Network. 2014. "Indicators for Sustainable Development Goals."

Course: Sustainable Environmental Management
Code: TKW82205
Credits: 2 credits
Prerequisite: None
Main Topics: This course discusses the concept of sustainability in community development with the primary goal of ensuring the welfare of society. It also explores the relationship between human activities and the environment, as well as the overall impacts, both spatial and non-spatial (social and economic).

References:

- Charles H. Eccleston. 2010. NEPA and Environmental Planning: Tools, Techniques, and Approaches for Practitioners. CRC Press.
- Chris Maser.2010. Social – Environmental Planning: The Design Interface Between Everyforest and Everycity, Social Environmental Sustainability. CRC Press
- Robert Cox. 2006. Environmental Communication and the Public Sphere. SAGE Publication
- Abaza and Rietbergen-McCracken. 1998. Environmental Valuation. UNEP.

Course: Poverty and Social Security
Code: TKW82203
Credits: 2 credits
Prerequisite: None
Main Topics: This course explains the definition of resilience, its stages and processes, as well as policies and efforts to enhance urban resilience.

References:

- ✓ Building Community Disaster Resilience Through Private-Public Collaboration,
- ✓ Applications of Social Network Analysis for Building Community Disaster Resilience
- ✓ Fostering Resilience and Well-Being in Children and Families in Poverty: Why Hope Still Matters
- ✓ Rainwater-Smart Agriculture in Arid and Semi-Arid Areas: Fostering the Use of Rainwater for Food Security, Poverty Alleviation, Landscape Restoration and Climate Resilience [1 ed.]
- ✓ The Vulnerability of Cities: Natural Disaster and Social Resilience,
- ✓ Navigating Social-Ecological Systems: Building Resilience for Complexity and Change [1st ed.]
- ✓ Mulligan. 1999. Social Security in Theory and Practice

Course: Integration of Land Use and Transportation
Code: TKW82204
Credits: 2 credits
Prerequisite: None
Main Topics:
This course discusses the concepts and elements of land use and transportation modeling, the mechanisms for implementing land use and transportation integration, and the use of integration techniques such as Transit-Oriented Development (TOD), area redevelopment, activity zoning, and development incentives.

References:

- Ministry of Urban Development Government of India. 2013. *Land Use Transport Integration and Density of Urban Growth*.
- Litman, Todd. 2012. *Land Use Impact on Transport: How Land Use Factors Affect Travel Behavior*. Victoria Transport Policy Institute.
- Tamin, O.Z. 2000. *Perencanaan dan Permodelan Transportasi*. Penerbit ITB Bandung.

Course: Humanitarian Logistics Management
Code: TKW82206
Credits: 2 credits
Prerequisite: None
Main Topics: The course on humanitarian logistics management provides students with insights

into the planning, execution, and control of the flow of humanitarian aid in disaster relief efforts. The aim is to effectively and efficiently deliver aid from the point of origin to the victims to alleviate their suffering.

References:

- Taniguchi, E., and Thomson, R. G. (2013). Humanitarian Logistics in the Great Tohoku Disaster 2011. In Zeimpekis, Vasileos., Ichoua, Soumia., Minis, Ioannis (Eds.). Humanitarian and Relief Logistics. London. UK: Springer
- Pramudita, Andie., Taniguchi, Eiichi. (2014). Model of Debris Collection Operation After Disasters and Its Application in Urban Area. International Journal of Urban Science. Vol. 18. 2014Issue 2: City Logistics
- Safeer, M., Anbuudayasankar, S.P., Balkumar, K., and Ganesh, K. (2014). Analysing Transportation and Distribution in Emergency Humanitarian Logistics. 12th Global Congress on Manufacturing and Management, pp. 2248-2258.
- Turniningtyas, dkk. (2018) Pengurangan Resiko Bencana Berbasis Tata Ruang. UB Press-Malang
- Sahay, B.S., Menon, N. Venod., and Gupta, Somed. (2015). Humanitarian Logistics and Disaster Management: The Role of Different Stakeholders. In Sahay, B.S., Menon, N. Venod., and Gupta, Somed (Eds.), Managing Humanitarian Logistics. 3-20. New Delhi. India: Springer