| Course | Course Name | : | Insight and Application Technology |
| --- | --- | --- | --- |
| | Course Code | : | UG18 4 9 16 |
| | Credit | : | 3 |
| | Semester | : | > 5 |

## COURSE DESCRIPTION

The Insight and Application of Technology (IAT) course is one of the Institute's content courses that must be taken. The IAT course is the hallmark of ITS, which will inspire students in developing insights into science, technology and innovation as well as the form of their application in society and the environment. Students will receive material 1) Systems Theory and Systematic Thinking, 2). Knowledge of ITS and National Research Roadmap, 3) Concepts and Knowledge of SDG's., 4). Introduction to Science and Technopark (STP), 5). Creative and Innovative Concepts, 6) Opensource Technology Concept, 7) Making Student Creativity Program Proposals or similar programs in preparing innovation-based projects along with PKM Proposal outputs (Articles and Videos). At the end of the lecture, students are able to prepare a Student Creativity Program Proposal (PKM). The benefits of learning IAT courses are: Students are able to explain, explain and implement problems in society and the environment with the Technology Application approach and expertise in their fields in accordance with the principles in the IAT teaching material.

## COURSE GRADUATE LEARNING OUTCOME

1. Able to cooperate and have social sensitivity, as well as concern for the community and the environment,
2. Able to apply logical, critical, systematic, and innovative thinking in the context of developing or implementing science and technology that pays attention to and applies humanities values in accordance with their field of expertise
3. Able to use Technology Applications for the development or implementation of scientific technology based on scientific principles, procedures and ethics in order to produce solutions and ideas.
4. Able to compile final reports / proposals or research / innovation projects / Student Creativity Program (PKM).

## COURSE LEARNING OUTCOME

1. Able to think systematically in solving general problems properly and correctly
2. Students Able to utilize research centers both local and national with technology applications
3. Able to have insight into the conservation of natural and human resources in applying science and technology for the benefit of Sustainable Development with SDG Theory and Concept.
4. Able to complete the making of Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Articles, Posters and Videos)

## STUDY MATERIALS

1. Introduction, RPS, Sillabus WASTEK, Systems Theory and Systemic Thinking
2. ITS and National Research Roadmap Knowledge
3. The concept of SDGs (Sustainable Development Goals)
4. Introduction to Science and Technopark Knowledge (STP)
5. Creative, Innovative Concepts and Knowledge

6. Open Source Technology
7. Concept of Student Creative Program Proposal (PKM)Reading strategies

| REFERENCES |
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Main References :
1. Akhmad Hidayatno, "BERPIKIR SISTEM", Pola Pikir Untuk Pemahaman Masalah Yang Lebih baik. 2016. Universitay of Indonesia.
2. Buku Tim Pengembang Mata Kuliah Wawasan Teknologi dan Komunikasi Ilmiah , "Wawasan Teknologi & Komunikasi Ilmiah", ITS Press, Surabaya, 2015.
3. Alfred Watkins and Michel Ehst, "Science, Technology and Innovation: Capacity Building for Sustainable Growth and Poverty Reduction", The International Bank for Reconstruction and Development, Washington DC, 2008.
4. Frieder Meyer Krahmer, "Innovation and Sustainable Development-Lesson for Innovation Policies, " A Springer-Verlag Company, Heidelberg, 1998.
5. Buku : ARAHAN Pelaksanaan Tujuan Pembangunan Berkelanjutan/SDGsTeam Leader Sekretariat SDGs Kementerian PPN/Bappenas, 1 Februari 2018, Alamat Kontak: Website : sdgs.bappenas.go.id