

## UG234916 - Applied Technology and Digital Transformation

<b>Module Name</b>	<b>Applied Technology and Digital Transformation</b>
<b>Module level, if applicable</b>	General Knowledge
<b>Code, if applicable</b>	UG184916
<b>Subtitle, if applicable</b>	-
<b>Course, if applicable</b>	Applied Technology and Digital Transformation
<b>Semester(s) in which the module is taught</b>	6 <sup>th</sup> Semester
<b>Person responsible for the module</b>	<p>Dra. Sukriyah Kustanti Moerad.MSi.  Dra, Endang Susilowati, M.Kes.  Lienggar Rahardiantino, SE.,M.Sc.  Deti Rahmawati, S.IP. M.T  Dr. Tridani Widyastuty, MSi.MT  Yudha Prasetyawan, ST. M.Eng.  Endarko, MSi. Ph.D  Gogor Arif Handiwibowo, ST.,MMT  Lissa Rosdianna ST.,MT  Gita Widi Bhawika, ST.,MT  Dr. Dra. Dian Saptarini, MSc.  Herdayanto S Putro, SSi, MSi.  Zjahra Vianita Nugraheni, SSi.,MSi.  Moh Singgih Purwanto, SSi.,MT.  Dr. Ir. Lily Pudjiastuti, MT.  Dr.Ir. Hasan Ikhwani, MSc.  Dr.Ir. Niniek Fajar Puspita, M.Eng.  Dyah Savitri, ST.,MT  Dr. Irhamah SSi., MSi.  Ir. Eko Nurmianto, M.Eng., Sc.  M. Riduwan, S.Kom.M. Kom. Dra. Sukriyah Kustanti Moerad, MSi TTd dari Kaprodi  Ir. Arief Abdurachman, MT.  Dr. Atria Pradityana, ST. MT.  Ciptian Weried P, SST.,  Ir. Joko Susilo, MT  Ir. Arief Musthofa , MT.  Muhammad Hafiizh Imaaduddin, MT</p>
<b>Lecturer</b>	<p>Dra. Sukriyah Kustanti Moerad.MSi.  Dra, Endang Susilowati, M.Kes.  Lienggar Rahardiantino, SE.,M.Sc.  Deti Rahmawati, S.IP. M.T  Dr. Tridani Widyastuty, MSi.MT  Yudha Prasetyawan, ST. M.Eng.  Endarko, MSi. Ph.D  Gogor Arif Handiwibowo, ST.,MMT</p>

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<b>Language</b>	Indonesian, English
<b>Relation to curriculum</b>	Compulsory Courses for undergraduate program in Urban and Regional Planning
<b>Type of teaching, contact hours</b>	<p>M1: Group discussion</p> <p>Lecture (Face to face lecture):  2.5 hours x 14 weeks  35 hours per semester</p>
<b>Workload</b>	<p>Regular (3 SKS)  Class: 2.5 hours x 14 weeks = 35 hours  Structured activities: 4 hours x 14 weeks = 56 hours  Independent Study: 3 hours x 14 weeks = 42 hours  Exam: 1.5 hours x 4 time = 6 hours  Total = 133 hours</p>
<b>Credit points</b>	3 SKS ~ 4.8 ECTS
<b>Requirements according to the examination regulations</b>	<p>Registered in this course  Minimum 80% attendance in this course</p>
<b>Recommended prerequisites</b>	-
<b>Module objectives/intended learning outcomes</b>	<p><b>General Knowledge:</b></p> <ol style="list-style-type: none"> <li>1. Able to cooperate and have social sensitivity, as well as concern for the community and the environment</li> <li>2. Able to apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pays attention to and applies humanities values in accordance with their field of expertise</li> </ol>

	<ol style="list-style-type: none"> <li>3. Able to use Technology Applications for the development or implementation of science and technology based on scientific rules, procedures and ethics in order to produce solutions, and ideas</li> <li>4. Able to compile a final report / Proposal or research / innovation project / Student Creativity Program (PKM)</li> </ol> <p><b>Specific Knowledge:</b></p> <ol style="list-style-type: none"> <li>1. Students understand the outline of the lecture from beginning to end, are able to understand the knowledge and concepts of digital literacy by thinking systematically in solving general problems properly and correctly</li> <li>2. Students able to utilize research centers both locally and nationally with technological applications and innovative products that are competitive</li> <li>3. Able to have conservation insights into natural and human resources in applying science and technology for the benefit of Sustainable Development with SDG's Theories and Concepts.</li> <li>4. Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos)</li> </ol>																					
<b>Content</b>	<ol style="list-style-type: none"> <li>1. Digital Literacy Knowledge and Concepts</li> <li>2. Theory of Systems Thinking and Information Transformation</li> <li>3. Introduction and Knowledge of Science Technopark (STP)</li> <li>4. Knowledge of ITS and National Research Roadmaps</li> <li>5. The concept of SDGs (Sustainable Development Goals)</li> <li>6. Open Source Technology and IT Ethics</li> <li>7. Student Creative Program Proposal Concept (PKM)</li> </ol>																					
<b>Study and examination requirements and forms of examination</b>	<p><b>6 assessments:</b></p> <table border="1" data-bbox="708 1731 1270 2024"> <thead> <tr> <th>Evaluation</th> <th>Method</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Individual task</td> <td>10%</td> </tr> <tr> <td>2</td> <td>Midterm exam</td> <td>25%</td> </tr> <tr> <td>3</td> <td>PKM Proposal</td> <td>30%</td> </tr> <tr> <td>4</td> <td>PKM Article</td> <td>10%</td> </tr> <tr> <td>5</td> <td>PKM Poster</td> <td>10%</td> </tr> <tr> <td>6</td> <td>PKM Video</td> <td>15%</td> </tr> </tbody> </table>	Evaluation	Method	Weight	1	Individual task	10%	2	Midterm exam	25%	3	PKM Proposal	30%	4	PKM Article	10%	5	PKM Poster	10%	6	PKM Video	15%
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	<ol style="list-style-type: none"> <li>1. <b><i>Individual task - week 2 &amp; week 5</i></b></li> <li>2. <b><i>Midterm exam - week 9</i></b></li> <li>3. <b><i>PKM Proposal - week 11-13</i></b></li> <li>4. <b><i>PKM Article - week 14</i></b></li> <li>5. <b><i>PKM Poster - week 14</i></b></li> <li>6. <b><i>PKM Video - week 15</i></b></li> </ol>
<b>Media employed</b>	Classical teaching tools with white board and power point presentation, audiovisual, zoom meeting, ITS online classroom.
<b>Reading list</b>	<p><b>Main reference:</b></p> <ol style="list-style-type: none"> <li>1. Digital Literacy : Tools and Methodologies for Information Society. Pier Casera Rivoltella, Universitas Cottolica del Sacro Cuore, Italy</li> <li>2. Akhmad Hidayatno, "BERPIKIR SISTEM", Pola Pikir Untuk Pemahaman Masalah Yang Lebih baik. 2016. Universitay of Indonesia.</li> <li>3. Gerakan Literasi Nasional, Kementrian Pendidikan dan Kebudayaan Jakarta, 2017</li> <li>4. Buku Tim Pengembang Mata Kuliah Wawasan Teknologi dan Komunikasi Ilmiah , "Wawasan Teknologi &amp; Komunikasi Ilmiah", ITS Press, Surabaya, 2015.</li> <li>5. 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.</li> <li>6. Frieder Meyer Kraemer, "Innovation and Sustainable Development-Lesson for Innovation Policies, " A Springer-Verlag Company, Heidelberg, 1998.</li> <li>7. Book : ARAHAN Pelaksanaan Tujuan Pembangunan Berkelanjutan/SDGsTeam Leader Sekretariat SDGs Kementerian PPN/Bappenas, 1 Februari 2018, Alamat Kontak: Website : <a href="http://sdgs.bappenas.go.id">sdgs.bappenas.go.id</a></li> </ol>