



<b>Short Course Description</b>	This course studies the main concepts in general software interface design and their application in products using data science. This course reviews the use of design, evaluation, analysis and data visualization concepts.						
<b>References</b>	<b>Main :</b>						
		<ol style="list-style-type: none"> <li>1. Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. Interaction Design: beyond human-computer interaction (6th edition). John Wiley &amp; Sons.</li> <li>2. Norman, D. A. 2013. The design of everyday things. MIT Press.</li> </ol>					
	<b>Supporters:</b>						
<b>Supporting lecturer</b>	Ibnu Febry Kurniawan, S.Kom., M.Sc. Fadhilah Qalbi Annisa, S.T., M.Sc.						
Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [ Estimated time]		Learning materials [ References ]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline ( offline )	Online ( online )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Explains the need to study human-computer interaction	<ol style="list-style-type: none"> <li>1.Explain the basic concepts of human-computer interaction</li> <li>2.Explain the difference between good and bad interaction design</li> <li>3.Explain the relationship between user experience and usability</li> </ol>	<b>Criteria:</b> Usability Evaluation Task  <b>Form of Assessment :</b> Participatory Activities, Practice/Performance	3 X 50 minutes		<b>Material:</b> What is interaction design <b>References:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. Interaction Design: beyond human-computer interaction (6th edition). John Wiley & Sons.	3%
2	Explaining human factors in the science of human-computer interaction	<ol style="list-style-type: none"> <li>1.Identify errors in design</li> <li>2.Understand the importance of human psychology in designing good designs</li> </ol>	<b>Form of Assessment :</b> Participatory Activities	3 X 50 minutes		<b>Material:</b> The psychopathology of everyday things; The psychology of everyday actions; <b>References:</b> Norman, DA 2013. The design of everyday things. MIT Press.	1%
3	Explain the interaction design process	<ol style="list-style-type: none"> <li>1.Explain the stages in interaction design</li> <li>2.Understand human characteristics and behavior</li> <li>3.Identify the implementation of humanitarian considerations in design</li> <li>4.Determine the problem in interaction system design that you want to solve</li> <li>5.Determine the design challenges that must be solved</li> </ol>	<b>Criteria:</b> <ol style="list-style-type: none"> <li>1.Determine the project topic and its justification</li> <li>2.Determine initial usability goals and experience goals</li> </ol> <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	3 X 50 minutes		<b>Material:</b> The process of interaction design <b>References:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. Interaction Design: beyond human-computer interaction (6th edition). John Wiley & Sons.  <b>Material:</b> Knowledge in the head and in the world; Knowing what to do: constraints discoverability and feedback; <b>References:</b> Norman, DA 2013. The design of everyday things. MIT Press.	3%

4	Analyze user characteristics and needs	<ol style="list-style-type: none"> <li>1. Determine data collection techniques that suit your needs</li> <li>2. Conduct qualitative and quantitative data analysis</li> </ol>	<p><b>Criteria:</b> Carrying out data collection and user analysis</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design Thinking <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p> <hr/> <p><b>Material:</b> Data analysis, interpretation, and presentation <b>Bibliography:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. <i>Interaction Design: beyond human-computer interaction (6th edition).</i> John Wiley &amp; Sons.</p>	3%
5	Implement data analysis and visualization techniques	<ol style="list-style-type: none"> <li>1. Present data appropriately</li> <li>2. Interpret data appropriately</li> </ol>	<p><b>Criteria:</b> Create User Personas</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Data analysis, interpretation, and presentation <b>Bibliography:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. <i>Interaction Design: beyond human-computer interaction (6th edition).</i> John Wiley &amp; Sons.</p>	7%
6	Designing human-computer interaction systems to solve real problems	Design alternative solutions to solve design problems	<p><b>Criteria:</b> User interface design solution mockup</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design, prototyping, construction <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p>	3%
7	Designing human-computer interaction systems to solve real problems	<ol style="list-style-type: none"> <li>1. Design alternative solutions to solve design problems</li> <li>2. Apply user interface design principles</li> </ol>	<p><b>Criteria:</b>  <ol style="list-style-type: none"> <li>1. User interface design solution mockup</li> <li>2. Create a system design</li> </ol> </p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design, prototyping, construction <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p>	3%
8	Midterm exam		<p><b>Form of Assessment :</b> Project Results Assessment / Product Assessment</p>	3 x 50 minutes			20%
9	Designing human-computer interaction systems to solve real problems	Designing user interface designs	<p><b>Criteria:</b> Create a user interface design</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design, prototyping, construction <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p>	3%
10	Designing human-computer interaction systems to solve real problems	<ol style="list-style-type: none"> <li>1. Designing user interface designs</li> <li>2. Create a user interface prototype</li> </ol>	<p><b>Criteria:</b> Create prototypes of design solutions</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design, prototyping, construction <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p>	3%

11	Designing human-computer interaction systems to solve real problems	Create a user interface prototype	<p><b>Criteria:</b> Presentation of prototype design solutions</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Design, prototyping, construction <b>Reference:</b> Norman, DA 2013. <i>The design of everyday things.</i> MIT Press.</p>	7%
12	Evaluate interaction system designs	<ol style="list-style-type: none"> <li>1.Explain the differences in techniques for usability and user experience evaluation</li> <li>2.Determine techniques for usability and user experience testing</li> </ol>	<p><b>Criteria:</b> Designing questions for usability evaluation</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Evaluation studies: from controlled to natural settings <b>Bibliography:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. <i>Interaction Design: beyond human-computer interaction (6th edition).</i> John Wiley &amp; Sons.</p>	3%
13	Evaluate interaction system designs	<ol style="list-style-type: none"> <li>1.Carrying out usability testing</li> <li>2.Evaluate the achievement of usability goals</li> <li>3.Evaluate the achievement of user experience goals</li> </ol>	<p><b>Criteria:</b> 1.Carrying out usability testing and evaluation 2.Carrying out user experience testing and evaluation</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Evaluation studies: from controlled to natural settings <b>Bibliography:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. <i>Interaction Design: beyond human-computer interaction (6th edition).</i> John Wiley &amp; Sons.</p>	7%
14	Designing human-computer interaction systems to solve real problems	Improve system design based on usability and user experience evaluation results	<p><b>Criteria:</b> Evaluate the usability and user experience of design solution improvements</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes		<p><b>Material:</b> Evaluation: inspections, analytics, and models <b>References:</b> Rogers, Yvonne; Sharp, Helen and Preece, Jenny. 2023. <i>Interaction Design: beyond human-computer interaction (6th edition).</i> John Wiley &amp; Sons.</p>	1%
15	Designing human-computer interaction systems to solve real problems	Document the process of designing human-computer interaction systems	<p><b>Criteria:</b> 1.Demonstrate project results 2.Compile a UX case study</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes			3%
16	Final exams	<ol style="list-style-type: none"> <li>1.Demonstrate project results</li> <li>2.Compile a UX case study</li> </ol>	<p><b>Criteria:</b> 1.Group Presentation 2.UX Case Studies</p> <p><b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment</p>	3 x 50 minutes			30%

**Evaluation Percentage Recap: Project Based Learning**

No	Evaluation	Percentage
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1.	Participatory Activities	39%
2.	Project Results Assessment / Product Assessment	59.5%
3.	Practice / Performance	1.5%
		100%

#### Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.