

Course Code	TKIT163105											
Course Name	Interoperability											
Course Instructors	Selo											
Course Type	Required											
Course Classification	Engineering Topics											
Credit / Contact Hour per Week	3 / 150 minutes per Week											
Course Description	This course aims to deliver fundamental knowledge on interoperability, on various level, such as data, application, architecture and services level. Furthermore, this course also provide some of up-to-date example of framework that support interoperability.											
Prerequisites Courses	Software Engineering (TKIT162208)											
Covered Student Outcome	Development of Engineering Solution (b) Engineering Design (c) Data and Experiment (d)											
Learning Outcome												
		Study Program Student Outcome										
No	Learning Outcome	SO (a) – SO (k)										
1.	Student are able to explain the concept and theory of print interoperability with other terms such as, compatibility, integration, and others. Students have the ability to identify interoperability within an organization or issues between organizations.	Development of Engineering Solution (b)										
2.	Student are able to describe important components of interoperable systems	Engineering Design (c)										
3.	Student are able to use available techniques and tools for integrating data	Data & Experiment (d)										
4.	Students are able to develop a simple solution interoperability solve integration and heterogeneity problems.	Development of Engineering Solution (b)										
Topic	<ol style="list-style-type: none"> The background of interoperability. Interoperability Level Standard (LISI). Types of interoperability. Interoperability in Data Level. Interoperability in Application Level. Interoperability in Architecture level. Interoperability in Service Level. Case study: XML. Case study: CORBA. Case study: The Services. Case study: Unified Communication. Case study: Identity Metasystem. Case study: Cloud Computing. Interoperability Blueprint. 											
Direct Assessment	<table border="1"> <thead> <tr> <th>Direct Assessment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Engineering Design Assignment – Creating Proof of Concept</td> <td>LO2, LO4</td> </tr> <tr> <td>Engineering Design Assignment – Presenting the solution</td> <td>LO3</td> </tr> <tr> <td>Mid Exam</td> <td>LO1, LO4</td> </tr> <tr> <td>Final Exam</td> <td>LO1, LO2</td> </tr> </tbody> </table>		Direct Assessment Plan	Measured Learning Outcome	Engineering Design Assignment – Creating Proof of Concept	LO2, LO4	Engineering Design Assignment – Presenting the solution	LO3	Mid Exam	LO1, LO4	Final Exam	LO1, LO2
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Engineering Design Assignment – Creating Proof of Concept	LO2, LO4											
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Mid Exam	LO1, LO4											
Final Exam	LO1, LO2											
Indirect Assessment	Questionnaire (EDOM)											
References	<ol style="list-style-type: none"> Supriya Ghosh. Net Centricity and Technological Interoperability in Organizations: Perspectives and Strategies. IGI Global. © 2010. Yannis Kalfoglou. Cases on Semantic Interoperability for Information Systems Integration: Practices and Applications. IGI Global. © 2010. 											

	<ul style="list-style-type: none"> [3] Ferraggine, Viviana E., Jorge Horacio Doorn, and Laura C. Rivero (eds). Handbook of Research on Innovations in Database Technologies and Applications: Current and Future Trends. IGI Global. © 2009. [4] Peltzer, Dwight. .NET & J2EE Interoperability. McGraw-Hill/Osborne. © 2004. [5] Troelsen, Andrew. COM and .NET Interoperability. Apress. © 2002. [6] Laudati, Peter, and et al. Application Interoperability: Microsoft .NET and J2EE. Microsoft Press. © 2003. [7] Wyke, R. Allen, Sultan Rahman, and Brad Leupen. XML Programming. Microsoft Press. © 2002. [8] Liang-Jie Zhang. Web Services Research for Emerging Applications: Discoveries and Trends. IGI Global. © 2010. [9] Siegel, Jon. CORBA 3: Fundamentals and Programming, Second Edition. John Wiley & Sons. © 2000. [10] Sosinsky, Barrie. Cloud Computing Bible. John Wiley & Sons. © 2011. [11] Group, Butler. Unified Communications and Collaboration: Laying the Foundations for Business Process Flexibility and Innovation. Butler Group. © 2008. [12] Bertocci, Vittorio. Programming Windows Identity Foundation. Microsoft Press. © 2011
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