

<b>Course Name</b>	<b>Software Architecture and Design</b>	<b>Course Code</b>	COMP 575			
<b>Credit Hours</b>	3	<b>Contact Hours</b>	<b>Theory</b>	<b>Lab</b>	<b>Total</b>	
			2	2	4	
<b>Offered as</b>	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Program Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> ITEC <input checked="" type="checkbox"/> COMP <input type="checkbox"/> CNET					
<b>Level</b>	1	<b>Prerequisite</b>	NIL			
<b>Course Description:</b> <p>This course provides working knowledge of the terms, principles and methods of Software Architecture and Design. Aspects of Data modeling and processing, Web services-SOAP, WSDL and presentation layer JSON and JQUERY covered. The course enunciating the role of architecture and design in software assurance for dependability, including performance, reliability and security. Recent advances in design techniques, software patterns, and design refactoring introduced. The emphasis of the course is on design patterns that the working software engineer for enterprise systems can use to develop DDA, SOA, ROA and EDA for enterprise computing.</p>						
<b>Course objectives:</b> <ul style="list-style-type: none"> <li>♦ Gain knowledge of current component models in terms of their design, management and related issues.</li> <li>♦ Construct an architecture using the "4+1" model.</li> <li>♦ Show and emphasize the architecture's critical role in software engineering</li> <li>♦ Teach a set of commonly used architecture styles and architecture patterns.</li> <li>♦ Present techniques and approaches for designing applications from an architecture-centric perspective.</li> </ul>						
<b>Grading</b>	<input checked="" type="checkbox"/> Exam 1	10%	<input checked="" type="checkbox"/> Exam 2	10%	<input checked="" type="checkbox"/> Assignment(s)	20%
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	20%	<input type="checkbox"/> Mini Project	
<b>Text Book:</b> <ul style="list-style-type: none"> <li>♦ Dominic Duggan , Enterprise Software Architecture and Design: Entities, Services, and Resources , Wiley, 2012</li> </ul>						
<b>References:</b> <ul style="list-style-type: none"> <li>♦ “Essential Software Architecture”, 2nd Edition, Ian Gorton, Springer-Verlag Berlin Heidelberg 2006, ISBN-13 978-3-540-28713-1</li> <li>♦ Documenting Software Architectures: Views and Beyond Paul Clements, Felix Bachmann, Len Bass, David Garlen, James</li> </ul>						