










# CIT-130: Object-oriented design in Java

The following table maps course session dates, lesson topics, LIANG9 references, and content links for all three Java courses in the series.

Course	SP20 Est.	Wk	Sess	Session description	Resources	Learning objectives	Out-of-class work
CIT-130	MON 27-JAN-20	1			<p><b>Fiddling with Strings and Arrays: Review of Objects, types, classes, &amp; methods</b></p> <p>print <b>Week 1 Module: Passwords</b></p>  <p><b>LIANG9 Chapter 6</b> <b>LIANG9 Chapter 9</b></p>	<p><b>CCAC.130.LO.3:</b> Apply Java language elements to use string(sic) processing techniques in a program</p> <p><b>CCAC.130.LO.4:</b> Apply Java language elements to create programs with single dimension arrays of primitives and objects. APply Java language elements to use string(sic) processing techniques in a program</p>	
CIT-130	WED 29-JAN-20	1		 <p>Too cold for school!</p>		<p><b>1.E.1: Design an algorithm for processing password candidates and strength auditing</b></p> <p><b>1.P.1: Initiating an empty git repo on a remote, cloning, pushing, and pulling</b></p>	
CIT-130	MON 3-FEB-20	2	1		<p><b>Plain old arrays to ArrayLists: Introduction to the Collection classes</b></p> <p><b>Exercise 1:</b> Continue work on the Week 1 Passwords module</p> <p>print <b>Week 2 Module: Student inheritance hierarchy</b></p> <p><b>Exercise 2:</b> Adding HSStudent and CollegeStudentsubclasses</p> <p><b>TODO for Monday:</b> Work your password StrengthChecker class into sharable condition for printing first thing Monday</p>	<p><b>TR.130.2.L.1:</b> Create a two-class object hierarchy and demonstrate accessing a parent's data from the child</p> <p><b>TR.130.2.L.2:</b> Demonstrate a core feature of inheritance by storing and manipulating an object reference to a child class in a variable typed to the parent</p> <p><b>TR.130.2.L.3:</b> Write a program that uses Object-type variables and type casting to manipulate objects in a sample class hierarchy</p>	

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CIT-130	WED 5-FEB-2020	2		First implementation of the Student class hierarchy		<p><b>CCAC.130.LO.5:</b> Apply Java language elements to create programs utilizing inheritance</p> <p><b>TR.130.2.E.1:</b> Great graphical representations of both human and Java-based inheritance hierarchies and explain the similarities and differences of each</p> <p><b>TR.130.2.P.1:</b> Install and use a NetBeans plugin to visualize an Object inheritance hierarchy</p>	
CIT-130	MON 10-FEB-2020	3	1		<p><b>Inheritance Pt.1: Create a class hierarchy (a tree) by giving a class a parent with extends</b></p> <p> <b>LIANG9: Chapter 11 - Inheritance</b></p>	<p><b>CCAC.130.LO.5:</b> Apply Java language elements to create programs utilizing inheritance</p>	
CIT-130	WED 12-FEB-2020		2				
CIT-130	MON 17-FEB-2020	4	1	Complete our inheritance project	<p><b>Inheritance Pt.2: Modeling computer timelines</b></p> <p><b>visibility_off Timeline project specs</b></p> <p> <b>LIANG9: Chapter 11 - Inheritance</b></p>	<p><b>CCAC.130.LO.5:</b> Apply Java language elements to create programs utilizing inheritance</p>	<p><b>Study the Liang9 chapter 11 - inheritance and complete the two practice questions and the mini-project</b></p>
CIT-130	WED 19-FEB-2020		2	Print and include in your folder your Student[] array class	<p>Create a Java-based representation of the computer history timeline hanging in the hall outside of S21133</p> <p><b>computer Computing power timeline</b></p>		
CIT-130	MON 24-FEB-2020	5	1		<p><b>visibility_off Timeline project specs</b></p> <p> <b>LIANG9: Chapter 11 - Inheritance</b></p>	<p><b>TR.130.5.L.1:</b> Create a class hierarchy diagram by hand of your chosen API classes including all relevant interfaces and super-classes</p>	

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					Create a Java-based representation of the computer history timeline hanging in the hall outside of S21133		
CIT-130	WED 26-FEB-2020	2		Worktime on timeline modeling	computer Computing power timeline		
CIT-130	MON 2-MAR-2020	6	1	Begin API project	<b>Inheritance &amp; Collections project design; software engineering techniques</b>	<b>Java.collections.1:</b> Convert array-based data structures into LinkedList structures	<b>Completely digest Liang Chapter 22 &amp; attempt at least one exercise and one mini-project from the suggested list for Chapter 22</b>
CIT-130	WED 4-MAR-2020		2		merge_type API Inheritance project	<b>Java.collections.2:</b> Implement all major methods on LinkedList class	
CIT-130	MON 9-MAR-2020	7	1		<b>Inheritance &amp; Collection: Map-based data structures</b>	<b>7.L.1:</b> <b>7.L.2:</b>	
CIT-130	WED 11-MAR-2020		2	Sharing inheritance & Collection projects	print Mission Impossible maps LIANG9 Textbook: Chapter 23: Sets and maps		
CIT-130	MON 16-MAR-2020	8	1		<b>Simulation with Collections Classes and secret agents</b>	<b>SIM.1:</b> Use a random number generator and methods to create many instances of a class to simulate a real-world situation.	
CIT-130	WED 18-MAR-2020		2	Building min/max/average algorithms step-by-step	Tie together our developing knowledge of the collections classes with new skills in algorithm development by creating a simulation machine which		
CIT-130	MON 23-MAR-2020	9	1		print Simulating secret agent missions	<b>9.L.1:</b> <b>9.L.2:</b>	
CIT-130	WED 25-MAR-2020		2	Last work day on Agent simulations		<b>CCAC.130.LO.2:</b> Apply Java language elements to create Swing GUI components with event handling	

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CIT-130	MON 30-MAR-2020	10	Mission simulators Begin design patterns exploration	<b>Design patterns:</b> <b>Model-View-controller structures</b> <b>sim_card</b> <b>Plane crash simulation MVC example</b> <b>book</b> <b>Formative (1992) paper on Model-View-Controller by Steve Burbeck (PDF)</b>	<b>10.L.1:</b>  <b>10.L.2:</b> <b>CCAC.130.LO.2:</b> Apply Java language elements to create Swing GUI components with event handling	
CIT-130	WED 1-APR-2020	2	Designing your own View of the MVC			
CIT-130	MON 6-APR-2020	-				
CIT-130	WED 8-APR-2020	-				
CIT-130	MON 13-APR-2020	11		<b>GUI &amp; Inheritance project workshop</b> <b>settings_applications</b> <b>movie</b> AWT GUI Intro packet Movie GUIs	<b>11.L.1:</b>  <b>11.L.2:</b>	
CIT-130	WED 15-APR-2020	2	Share GUI & inheritance projects			
CIT-130	MON 20-APR-2020	1		<b>GUI &amp; Inheritance project workshop</b> <b>settings_applications</b> AWT GUI Intro packet	<b>12.L.1:</b>  <b>12.L.2:</b>	
CIT-130	WED 22-APR-2020	12	assessment	 <b>LIANG9 Course planning survey</b>  <b>LIANG9 Textbook: Chapter 12: GUI basics</b>  <b>LIANG9 Textbook: Chapter 16: Event-driven programming</b>  <b>LIANG9 Textbook: Chapter 17: GUI Components</b> <b>movie</b> <b>Movie GUIs</b>		
CIT-130	MON 27-APR-2020	13		<b>Exceptional term projects: design and workshop time</b> <b>print</b>	<b>13.L.1:</b>  <b>13.L.2:</b>	

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CIT-130	WED 29-APR- 2020	2					
CIT-130	WED 6-MAY- 2020	14	1	<ul style="list-style-type: none"> <li>* Bring fully-baked projects to share.</li> <li>* Same time and place as normal Wednesday class</li> </ul>	<p><b>Sharing term projects and final checkout assessment</b></p> <p><a href="#">Course planning survey</a></p> <p><a href="#">print Final session checklist</a></p>	<b>14.L.1:</b>	