Slide #	Summary	Theoretical/Technical/Informational	Concept	Week
2-5	• Introduction to causal analysis • Motivation for causal inference/discovery	Informational	Causal Analysis	0
6-10	• Introduction to DoWhy (what is it) • Main functionalities/capabilities of DoWhy • Major pros/cons of DoWhy	Informational	DoWhy	0
14-17	• Tetrad, causalml, causal discovery toolbox, causalnex (pros/cons)	Informational	Tetrad, causal discovery toolbox, causalnex	1/2
18	• Summary table to compile the analysis and research on the 5 different tools related/dedicated to causal analysis • Note that a revised version was sent separately	Informational	Summary table	1/2/3
20	• Short intro to quasi-experimental design • Comparison between experimental design and quasi-experimental design	Theoretical	Quasi-experimental design	1/2
24-27	• Screenshots of graph-based apis that are used o the backend • Main point is that all the tools have network capabilities	Technical	Networkx	3

29-35	• Analysis conducted to compare the performance of DoWhy and causalnex on the Sachs dataset
	• Contains information about
	  1. Causal graph refutations
	  2. Causal estimate refutations
		Technical	DoWhy & Causalnex	4

36-40	• Refutations in DoWhy with specific api references to validate causal graphs • Causal minimality is also explained	Informational and Technical	DoWhy	5
42	• Diagram of the pipeline to be used when performing effect estimation	Technical	DoWhy	6
43	• Refutations of causal graphs in DoWhy – but a bird's eye view	Informational	DoWhy	6
45	• List of causal tasks that can be done with DoWhy	Informational	DoWhy	6
46	• Formal definition of effect estimation	Theoretical	Effect Estimation	6
48	• causal-learn doesn't provide a verified way of injecting background knowledge at-the-time of search	Theoretical	Knowledge Injection	7/8
49	• There is a critical difference between interventional and counterfactual data	Theoretical	Interventional vs Counterfactual data	7/8
50-51	• Graphical causal models in DoWhy are different than vanilla causal models in the sense that vanilla causal models do not contain information about the causal mechanisms	Technical	DoWhy	7/8
52	• Anomaly attribution is a common task that a user may ask of a dataset • In particular, the question is *what has caused the outlier in my dataset?* • Isolated Forest is a popular choice for anomaly detection	Theoretical and Technical	Anomaly Detection	7/8
55	• Introduced the three major categories of causal search algorithms • Emphasis on the underlying implications and assumptions of each of these algorithms	Theoretical	Causal Search Algorithms	9
58	• Discussion about the pipeline automation progress	Technical	Pipeline Automation	12