

Module		Week	Hr	Topic		Instructor	Assignment	
I	Form finding	Week 1 (2/24)	1	Lecture 1	Form finding of Funicular Shell Structures	Dr. Juney Lee	Assignment 0	
			2	Tutorial 1	Form finding with compas-RV2	Dr. Juney Lee		
			3					
II	Geometry	Week 2 (3/3)	1	Tutorial 2	Procedural thiking: logic diagrams, flow charts, pseudocodes, Introduction to Jupyter Notebook, Introduction to the Python programming language	Serban Bodea and Chaoyu Du	Assignment 1	
			2					
			3	Work Session 2	Ex. 2.1 Cost of cablenet elements Ex. 2.2 Check voussoir weight	Chaoyu Du		
		Week 3 (3/10)	1	Tutorial 3	Coding in Python: data types, for-loops, conditionals	Serban Bodea and Chaoyu Du		
			2	Work Session 3	Ex. 3.1 Organising your design data Ex. 3.2 Managing your design data	Chaoyu Du		
			3					
		Week 4 (3/17)	1	Tutorial 4	Introduction to computational geometry in COMPAS Geometry and Class in COMPAS	Serban Bodea and Chaoyu Du		
			2					
		3	Work Session 4	Ex. 4.2 Visualising Geometries using the Compas Plotter	Chaoyu Du			
		Week 5 (3/24)	Seminar week					
III	Materialisation	Week 6 (3/31)	1	Lecture 2	Geometry, Rationalization & Materialization	Dr. Juney Lee	Assignment 2	
			2	Tutorial 5	Introduction to The Mesh Half-edge data structure	Dr. Juney Lee and Chaoyu Du		
			3	Work Session 5	Ex. 5.1 Segmented shell from Mesh Half-edge data structure Ex. 5.2 Visualizing the Mesh Half-edge data structure with COMPAS	Dr. Juney Lee and Chaoyu Du		
		Week 7 (4/7)	1	Tutorial 6	Operations with the Mesh Half-edge data structure	Dr. Juney Lee and Chaoyu Du		
			2	Work Session 6	Ex. 6.4 Mesh Topological Modification on vertices and faces Ex. 6.4a Topology modification through deletion Ex. 6.4 Mesh Topological Modification on vertices and faces Ex. 6.4b Topology modification through subdivision	Dr. Juney Lee and Chaoyu Du		
			3					
		Week 8 (4/14)	1	Tutorial 7	Geometry rationalization and materialization methods for funicular structures: Case Studies	Dr. Juney Lee and Chaoyu Du		
			2	Work Session 7	Ex. 7.1 Rationalization and materialization methods for meshes	Dr. Juney Lee		
			3					
		Week 9 (4/21)	Easter					
IV	Fabrication	Week 10 (4/28)	1	Lecture 3	Introduction to Computer Assisted Manufacturing for Architecture Engineering and Construction	Serban Bodea	Assignment 3	
			2	Tutorial 8	Subtractive Manufacturing methods	Serban Bodea		
			3	Work Session 8	Ex. 8.1 Material selection Ex. 8.2 Subtractive method selection Ex. 8.3 Process workflow Ex. 8.4 Fabrication and machine constraints	Selina Bitting and Chaoyu Du		
		Week 11 (5/5)	1	Tutorial 9	Introduction to Hotwire Cutting	Chaoyu Du		
			2	Work Session 9	Ex. 9.1 Orient Block for Cutting Ex. 9.2 Add Geometry of Cutting Material Ex. 9.3 Place Block w/ Cutting Material on Machine Bed Ex. 9.4 Generate Wire Cutter Path & Output	Chaoyu Du and Selina Bitting		
			3					
		Week 12 (5/12)	1	Tutorial 10	Introduction to Milling	Selina Bitting		
			2	Work Session 10	Ex. 10.1 Orient blocks in panel Ex. 10.2 Place panels w/ blocks on Machine Bed Ex. 10.3 Generate CNC Paths & Output	Selina Bitting and Chaoyu Du		
		3						
		Week 13 (5/19)	1	Lecture 4	Guest lecture: Dr. Catherine De Wolf			
			2		Project presentations			
			3					