

Module	Submodule	Unit	Trajectory					Research cycle					Title	Description	
			General	Phi personal	Phi	Meth	Meteo	Theory	Hypothesis	Exp.	Analysis	Conclusion			Synthesis
0			-	-	-	-	-	-	-	-	-	-	-	Introduction to the course	
0	0.1		.	.	.	.	.	.	.	.	.	.	.	Introduction to the course	
1			-	-	-	-	-	-	-	-	-	-	-	Know they tools	
1	1.1		.	.	.	.	.	.	.	.	.	.	.	Program	
1	1.1	1.1.1	x	x	x	x								Introduction + learning objectives	
1	1.2		.	.	.	.	.	.	.	.	.	.	.	Context and theory	
1	1.2	1.2.2		x			x							Rationalism, empiricism, logical positivism	
1	1.3		.	.	.	.	.	.	.	.	.	.	.	Hypothesis	
1	1.3	1.3.2		x				x						Logical positivism, research question and hypothesis	
1	1.3	1.3.2		x				x						Deductive and inductive reasoning	
1	1.4		.	.	.	.	.	.	.	.	.	.	.	Experiment and analysis	
1	1.5		.	.	.	.	.	.	.	.	.	.	.	Conclusion	
1	1.6		.	.	.	.	.	.	.	.	.	.	.	Synthesis	
2			-	-	-	-	-	-	-	-	-	-	-	Everything has a cause	
2	2.1		.	.	.	.	.	.	.	.	.	.	.	Program	
2	2.1	2.1.1	x	x	x	x								Introduction + learning objectives	
2	2.2	2.2.2		x				x						Logical positivism, empirical cycle	
2	2.2	2.2.2		x				x						Criticism to logical positivism: theory-ladenness of observations	
2	2.2	2.2.2		x				x						Criticism to logical positivism: logical soundness of verification	
2	2.2	2.2.2		x				x						Criticism to logical positivism: observability of variables	
2	2.3		.	.	.	.	.	.	.	.	.	.	.	Hypothesis	
2	2.3	2.3.2		x				x						The problem of induction: no guarantee that A always causes B	
2	2.4		.	.	.	.	.	.	.	.	.	.	.	Experiment analysis	
2	2.4	2.4.2		x				x						The relation between theory, model and simulation	
2	2.5		.	.	.	.	.	.	.	.	.	.	.	Conclusions	
2	2.6		.	.	.	.	.	.	.	.	.	.	.	Synthesis	
3			-	-	-	-	-	-	-	-	-	-	-	Trust, verify, falsify	
3	3.1		.	.	.	.	.	.	.	.	.	.	.	Program	
3	3.1	3.1.1	x	x	x	x								Program and learning objectives	
3	3.2		.	.	.	.	.	.	.	.	.	.	.	Theory	
3	3.2	3.2.2		x				x						Popper and critical rationalism	

3	3.3	.	.	.	.	.	.	.	.	.	.	.	Hypothesis
3	3.4	.	.	.	.	.	.	.	.	.	.	.	Experimental and Analysis
3	3.4 3.4.2		x					x					Aspects of uncertainty in simulations
3	3.5	.	.	.	.	.	.	.	.	.	.	.	Conclusions
3	3.6	.	.	.	.	.	.	.	.	.	.	.	Synthesis
4		-	-	-	-	-	-	-	-	-	-	-	Scientific Progress is all about Asking Questions
4	4.1	.	.	.	.	.	.	.	.	.	.	.	Program
4	4.1 4.1.1	x		x	x	x							Program and learning objectives
4	4.2	.	.	.	.	.	.	.	.	.	.	.	Theory
4	4.2 4.2.2		x					x					Succession of paradigms, research programs, research traditions
4	4.3	.	.	.	.	.	.	.	.	.	.	.	Hypothesis
4	4.4	.	.	.	.	.	.	.	.	.	.	.	Experiments and analysis
4	4.5	.	.	.	.	.	.	.	.	.	.	.	Conclusions
4	4.6	.	.	.	.	.	.	.	.	.	.	.	Synthesis
5		-	-	-	-	-	-	-	-	-	-	-	To plan or not to plan
5	5.1	.	.	.	.	.	.	.	.	.	.	.	Program
5	5.2	.	.	.	.	.	.	.	.	.	.	.	Writing your proposal
5	5.3	.	.	.	.	.	.	.	.	.	.	.	Receiving feedback
6		-	-	-	-	-	-	-	-	-	-	-	The proof of the pudding
6	6.1	.	.	.	.	.	.	.	.	.	.	.	Program
6	6.2	.	.	.	.	.	.	.	.	.	.	.	Performing your research
6	6.2 6.2.1		x	x		x	x	x	x	x	x	x	Reflect on questions regarding your methodology
6	6.2 6.2.2		x	x	x	x	x	x	x	x	x	x	Perform your research project
6	6.3	.	.	.	.	.	.	.	.	.	.	.	Receiving feedback
6	6.3 6.3.2		x	x	x	x	x	x	x	x	x	x	Finalize your report, including appendices on methodology and your checklist; and hand it in