

Week	Start Date	Topic	Session	Activity	Milestones
1	4 <sup>th</sup> March	Intro	1. Intro and outline	N/A	
			2. Tools of the trade: LaTeX	Your 1 <sup>st</sup> LaTeX doc.	
			3. Projects	Your 1 <sup>st</sup> LaTeX doc.	
2	11 <sup>th</sup> March	Tessellation	4. Tools of the trade: Matlab, Tessellation in nature	Hexagonal tessellation	Milestone 1
			5. Symmetry and tessellations: the language of patterns	Hexagonal tessellation (continued)	
			6. Irregular tilings	Conway's tiling	
3	18 <sup>th</sup> March	Periodicity	7. Periodicity, superposition of sinusoids	Create a plot	Milestone 2
			8. The (Fast) Fourier Transform (FFT)	FFT of a signal	
			9. FFT for analysis	FFT of a signal (cont.)	
4	25 <sup>th</sup> March	Continuum models	10. Diffusion processes and difference eqns	Difference equations	Milestone 3
			11. 2D diffusion and noise textures		
			12. Diffusion and smoothing	Noise	
5	1 <sup>st</sup> April	Discrete models	13. Random Walk	Project pointers	Milestone 4
			14. 2D Random Walks	Project pointers	
			15. Continuum limits of random walks	Project pointers	
6	8 <sup>th</sup> April	Projects	16. Reaction Systems	Project pointers	
			17. Reaction-Diffusion Systems	Project pointers	
			18. Tools of the trade: Inkscape	Inkscape poster template	Submit project topics
BREAK					
7	29 <sup>rd</sup> April	Complexity	Guest Lecture: Christian Huber (ACAD)	DNA models	
			19. Measuring success (simple stats)	Project pointers	
			20. Measuring success (Bonini)	Project pointers	
8	6 <sup>th</sup> May	Statistics	21. More patterns: Cellular automata	Apply golly	
			Project session	Project pointers	
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9	13 <sup>th</sup> May	<h1 style="margin: 0;">PURE MATH SEGMENT</h1>			Draft poster due.
10	20 <sup>th</sup> May				Final report 1 due.
11	27 <sup>th</sup> May				Final posters due.
12	3 <sup>rd</sup> June		Poster presentations: time to be advised		
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13	10 <sup>th</sup> June		Extra week		Final report 2 due.