ALGEBRAIC GEOMETRY 2022–2023

	DAY	TIME	WHERE	TYPE	TOPICS
LECTURE 1	11 October 2022	16:00 - 18:00	Room 134 (SISSA)	Theory	Presheaves, sheaves, morphisms, constant presheaves, sheaf condition via equalisers.
LECTURE 2	13 October 2022	16:00 - 18:00	Room 134 (SISSA)	Theory	Stalks, compatible germs. Surjectivity of maps of sheaves. Characterisation of isomorphisms via stalks (proof). Existence of sheafification (proof).
LECTURE 3	18 October 2022	9:00 - 11:00	Room 136 (SISSA)	Theory	Skyscrapers. Exact sequences of sheaves. Defining sheaves on basic open sets. Direct image sheaf. Supports of sheaves and sections.
LECTURE 4	18 October 2022	16:00 - 18:00	Room 128 (SISSA)	Theory	Inverse image sheaf and the adjunction with direct image. Locally ringed spaces, their morphisms. Closed immersions = ideal sheaves.
LECTURE 5	20 October 2022	16:00 - 18:00	Room 137 (SISSA)	Theory	Spectrum of a ring, Zariski topology. Closed points. First examples of Spec(A).
LECTURE 6	25 October 2022	9:00 - 11:00	Room 136 (SISSA)	Theory	Localisation of a module. Structure sheaf of Spec(A). Definition of affine schemes. Schemes. Quasicompact, connected, irreducible schemes.
LECTURE 7	25 October 2022	16:00 - 18:00	Room 005 (SISSA)	Exercises	Local ring of Spec(A) at at prime ideal. Connectedness and idempotents. Localisation. Residue field of local ring at a maximal ideal of a ring.
LECTURE 8	27 October 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	Definition of affine schemes and schemes. Morphisms of affine schemes. Spec is an equivalence Rings^op —> Aff.
LECTURE 9	8 November 2022	9:00 - 11:00	Room 136 (SISSA)	Theory	
LECTURE 10	8 November 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 11	10 November 2022	16:00 - 18:00	Room 005 (SISSA)	Exercises	
LECTURE 12	15 November 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 13	22 November 2022	16:00 - 18:00	Room 134 (SISSA)	Theory	
LECTURE 14	24 November 2022	16:00 - 18:00	Room 134 (SISSA)	Theory	
LECTURE 15	29 November 2022	9:00 - 11:00	Room 136 (SISSA)	Exercises	
LECTURE 16	29 November 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 17	1 December 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 18	6 December 2022	16:00 - 18:00	Room 134 (SISSA)	Theory	
LECTURE 19	13 December 2022	16:00 - 18:00	Room 005 (SISSA)	Exercises	
LECTURE 20	15 December 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 21	20 December 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 22	22 December 2022	16:00 - 18:00	Room 005 (SISSA)	Theory	
LECTURE 23	10 January 2023	16:00 - 18:00	Room 005 (SISSA)	Exercises	
LECTURE 24	12 January 2023	16:00 - 18:00	Room 005 (SISSA)	Exercises	
LECTURE 25 (PHD)			Room 005 (SISSA)	Theory	
LECTURE 26 (PHD)			Room 005 (SISSA)	Theory	
LECTURE 27 (PHD)			Room 005 (SISSA)	Theory	
LECTURE 28 (PHD)			Room 005 (SISSA)	Theory	
LECTURE 29 (PHD)			Room 005 (SISSA)	Theory	
LECTURE 30 (PHD)			Room 005 (SISSA)	Theory	