Lecture 1

–Introduction to arithmetic fundamental groups and path torsors.
–Galois actions. Grothendieck's section conjecture.
–Unipotent completions and Lie algebras. Galois actions and periods on unipotent completions.

Supplementary lecture: Romyar Sharifi (Galois actions on fundamental groups, Ihara theory)

Lecture 2

–Non-abelian cohomology and construction of classifying spaces for torsors.
–The crystalline condition on local torsors.
–De Rham/crystalline fundamental group and path torsors.
–Construction of De Rham/crystalline classifying space.

Supplementary lecture: Amnon Besser (Conceptual approach to Coleman integration.)

Lecture 3

–p-adic Hodge theory and comparison isomorphisms.
–Computation of the local unipotent Albanese map and p-adic multiple polylogarithms.

Supplementary lecture: Bryden Cais (Comparison isomorphisms and Bloch-Kato log/exponential in the abelian case,)

Lecture 4

–Finiteness theorems I
–Projective line minus 3 points.
–Elliptic curves with CM.
–Curves with CM Jacobian.

Supplementary lecture: Henri Darmon (Iwasawa theory and p-adic L-functions.)

Lecture 5

–Finiteness theorems II
–Projective line minus three points over totally real field.
–Elliptic curve minus one point.
–Speculations on non-abelian duality.

Supplementary lecture: Jennifer Balakrishnan (Computational theory of iterated Coleman integration.)