Classical Problems in Commutative Algebra, Week 1
-speakers & references-

Florian Enescu (University of Utah): Local Cohomology, Local Duality and
Tight Closure Notions (5 lectures)

References:

M. P. Brodmann and R.Y. Sharp, Local Cohomology, Cambridge Univ. Press.
M. Hochster, Lecture Notes on Local Cohomology.
M. Hochster and C. Huneke, Tight closure, Invariant Theory, and the Briancon-Skoda
Theorem, JAMS, 1990.
C. Huneke, Tight closure and its applications, CBMS, 1996.

Claudia Miller (Syracuse University): Homological Algebra, the Frobenius
Endomorphisms and Smoothness
(4 lectures)

References:

W. Bruns and J. Herzog, Cohen-Macaulay Rings, Cambridge University Press.
H. Matsumura, Commutative Ring Theory, Cambridge University Press.
C. Miller, The Frobenius endomorphism and homological dimensions, Contemp.
Mathematics, 2003.
C. Peskine and L. Szpiro, Dimension projective finie et cohomologie locale, IHES, 1973.

Sean Sather-Wagstaff (Univ. of Illinois , Urbana-Champaign): Koszul (Co)Homology
and Intersection Multiplicities.
(4 lectures)

References:

W. Bruns and J. Herzog, Cohen-Macaulay Rings, Cambridge University Press.
H. Matsumura, Commutative Ring Theory, Cambridge University Press.
J. P. Serre, Local Algebra.

Sandra Spiroff (University of Utah): Cohen-Macaulay and Gorenstein Rings,
Auslander-Buchsbaum Formula, Cohen's Structure
Theorem, Chow Groups. (5 lectures)

References:

W. Bruns and J. Herzog, Cohen-Macaulay Rings, Cambridge University Press.
H. Matsumura, Commutative Ring Theory, Cambridge University Press.
P. Roberts, Multiplicities and Chern Classes in Local Algebra, Cambridge University
Press.