

## HISTORY OF MATH: TENTATIVE SCHEDULE

JON MCCAMMOND

- Week 1: (Euler, d'Alembert, Lagrange, Monge, Laplace, Legendre)
1. Mathematics up to Euler (quick overview and the importance of Euler)
  2. The French revolution and the école normale supérieure system
- Week 2: (Fourier, Germain, Gauss, Poisson, Poncelet, Cauchy)
1. Projective and non-euclidean geometry
  2. Complex analysis
- Week 3: (Abel, Jacobi, Dirichlet, Hamilton, Liouville, Grassmann)
1. Solving the quintic
  2. Quaternions and the Ausdehnungslehre
- Week 4: (Kummer, Galois, Sylvester, Weierstrass, Chebyshev, Cayley)
1. The Berlin school: the insistence on rigor and the rise of the seminar
  2. Statistics, probability and the rise of the nation-state
- Week 5: (Hermite, Kronecker, Riemann, Smith, Dedekind, Lie)
1. Ideal numbers and Fermat's last theorem
  2. The unity of 19th century mathematics: elliptic integrals, Riemann surfaces, and hypergeometric functions
- Week 6: (Cantor, Mittag-Leffler, Klein, Kovalevskaya, Poincaré, Hilbert)
1. Göttingen at its peak
  2. The Chicago world's fair and the development of American mathematics
  3. ICMS and international research conference
- Week 7: (E.L. Moore, Hadamard, Hausdorff, Cartan, Borel, Takagi)
1. Foundations and the rise of topology
  2. Lie groups and Lie algebras
- Week 8: (Hardy, Veblen, Brouwer, Noether, R.L. Moore, Lefschetz)
1. Bourbaki and the rise of abstraction
  2. Mathematics during and after the world wars (mathematics under the Nazis, Einstein et al. and the institute for advanced studies)
- Week 9: (Birkhoff, Weyl, Pólya, Ramanujan, Courant, Alexander)
1. Algebraic geometry and its quest for firm foundations
  2. Noncommutative geometry and the eventual reunion with physics
- Week 10: (Banach, Wiener, Aleksandrov, Zariski, Kolmogorov, von Neumann)
1. Mathematics during and after the cold war (Smale, Russian school, the migrations in the 90s)
  2. Technology and mathematics (TeX, email, pdfs, etc)

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