

PARTIAL DIFFERENTIAL EQUATIONS

Course program

a.y. 2016/17

(G. Orlandi)

Bibliography.

[E] Evans, L.C. ; Partial Differential Equations, Graduate Studies in Mathematics, 19. AMS, 1998

[G] Gomes, D., Pimentel, E. , Voksanyan, V; Regularity theory for mean-field games systems, Springer 2016

Course Program.

Transport equation [E] §2.1.1, 2.1.2

Method of Characteristics [E] §3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5

Introduction to Calculus of Variations and Hamilton-Jacobi equations [E] § 3.3.1, 3.3.2

Introduction to Mean field games [G] §1.1, 2.1, 2.4, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 6.1, 6.2, 6.6, 7.2

Second order parabolic equations [E] § 7.1.1, 7.1.2, 7.1.3, 7.1.4

Second order hyperbolic equations [E] § 7.2.1, 7.2.2

Wave equation [E] § 2.4.1, 2.4.2, 2.4.3

Semigroup theory [E] § 7.4.1, 7.4.2, 7.4.3