

1. **Course.** MAT6932, Topics in Descriptive Set Theory, meeting times MWF 8 in LIT 0207
2. **Instructor.** Jindrich Zapletal, <http://www.math.ufl.edu/~zapletal> office LIT 468, office hours MWF 9, office phone 352-392-0281x2777, e-mail zapletal@ufl.edu
3. **Course objective.** Developing the basics of the theory of Borel equivalence relations with applications to several areas of mathematics.
4. **Topical outline.** A. Borel reducibility of equivalence relations (ER): basic classes of ER, basic examples. B. Smooth ER: Silver dichotomy, examples. C. Countable ER: actions of countable groups, hyperfinite equivalence relations, Glimm-Effros dichotomy, amenability of groups, Banach-Tarski paradox and the largest countable ER. D. ER classifiable by countable structures: Friedman-Stanley jump, connections with model theory, turbulence. E. Orbit ER of Polish group actions: universal ER's and E1. F. Miscellanea: largest $K\sigma$ ER, largest analytic ER, ideals on natural numbers.
5. **Grading.** There will be three take-home exams including the final. They will contribute to the total grade with equal weight.
6. **Class attendance.** Will not be taken.
7. **Makeup exams.** It is possible to make up exams in conditions of family or medical emergency.
8. **Students with disabilities.** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.
9. **Textbooks.** Alexander Kechris: Classical Descriptive Set Theory, Graduate Texts in Mathematics, 156, Springer, 1995 (recommended). Su Gao: Invariant Descriptive Set Theory, Chapman and Hall/CRC, 2008, ISBN-13: 978-1584887935 (recommended).
10. **UF grading policies.** <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>