

**MATH 636: ALGEBRAIC FUNCTION FIELDS**

**FALL 2022-2023**

Instructor: Nurdagül Anbar Meidl

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Office: FENS G047

Lectures: Wednesday, 14:40-17:30 in FENS L062

Office Hours: By appointment

**You are responsible for every announcement made in class or in SUCourse+. Not attending the class or not following SUCourse+ regularly is not an excuse, in case you miss something.**

**TEXTBOOK:** Algebraic Function Fields and Codes, by Henning Stichtenoth, 2nd Edition, Springer-Verlag, 2009. Graduate Texts in Mathematics No. 254.

**COURSE CONTENT: The course covers the following topics, and it is subject to change.**

Places, valuation rings and discrete valuations of a function field

The rational function field

Divisors, Weil different adeles, genus

Riemann-Roch Theorem and its consequences

Extensions of function fields, ramification, Hurwitz genus formula

Constant field extensions, Galois extensions, Kummer and Artin-Schreier extensions

**GRADING:** Your grade depends on the following listed items. There will be no otherextra-credit opportunities.

• Midterm: 30%

• Final: 30%

• Project: 40%

Midterm: 8. Week, in the lecture

Final: TBA

**EXAM POLICY:**There will be one midterm and one final exam. The exams will be in the form of a written exam, in-person, and on campus. Exams are closed books. During the exam, the use of any books, notes, electronic devices (including cell phones, smart watches, calculators, computers, etc.), or any other kind of supporting learning material is NOT allowed. A student violating this rule will receive 0 points for that exam.

**MAKE-UP EXAMS**

If a student misses an exam, then s/he has to have a medical report by Sabancı Medline covering the exam date. Otherwise, it will be counted as “0”. With the valid excuse, contact the instructor immediately explaining your situation.