

CSE 341 Midterm Topic List

February 7, 2006

The following are the major topics that will be covered in the CSE 341 midterm exam, which will take place on Monday, February 13th. There will be time to review in sections this Thursday. An additional review session will be held Sunday, Feb. 12, at 3pm in EE1 037.

- Basic SML concepts such as bindings, expressions (including conditionals), functions
- Syntax, semantics, types, and evaluation
- Basic types in SML: tuples, records, lists, options
- Let expressions and other bindings; scope
- User defined types: (`datatype`) and type synonyms (`type`)
- Pattern matching, both in `case` expressions and function definitions; deep patterns
- Recursion, tail recursion (including accumulators), and mutual recursion
- Higher order functions including key idioms (map, reduce, filter), types for higher-order functions
- Currying and partial evaluation
- Type inference and polymorphism
- Function closures and environments
- Closures as Abstract Data Types
- Notions and types of program equivalence; syntactic sugar, functional equivalence (renaming, substitution, capture)
- Modules, structures and signatures — just basic ideas behind hiding and abstraction