Data structures
• Structs or records
• Enumerated types
• Multidimensional arrays
• Files, open, close, input and output, `ifstream`/`ofstream` classes
• `string` class
• Linked lists, `struct` implementation, traversal, insert nodes, remove nodes
• `typedef`

Functions
• Functions in `iomanip`
• C style I/O, `scanf` and `print`
• More standard library functions, `qsort`, `bsearch`, etc
• Function overloading, polymorphism
• Function templates,
• Inline functions
• Default parameters
• Const and function parameters

Pointer essentials
• Pointer basics and their relationship with arrays
• Dynamically allocated arrays: `new` and `delete` operators

Compilation
• Conditional compilation
• Compilation of multiple files, object files, linking or building
• Preprocessor directives: `#define` and `#include`

Classes
• `private`/`protected`/`public` qualifiers
• data and member functions / attributes and methods
• the pointer `this`, target or calling object
• constructors and destructors
• template classes
• implementing abstract data types
• dynamic classes
• inheritance
• virtual functions
• operator overloading

Recursion
• Base case, recursive call