A506 / C201 Placement Exam
List of Covered Topics

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