

# Programming Language1

This is an introductory course for beginners with no background in object oriented programming. The course teaches students how to write object-oriented programs. The course covers both object oriented programming design and implementation. Topics include: Basic syntax and semantics of a high-level language. Variables, expressions, and assignment. Simple I/O. Conditional and iterative control structures. Primitive and reference types, Functions/methods and parameter passing. Data representation in memory, Pointers Arrays. Searching and Sorting arrays. Strings and string processing, arrays and collections, top-down design and incremental development. Encapsulation and information hiding. Separation of behavior and implementation. Definition of classes: fields, methods, and constructors. Objects and Classes. Problem-solving strategies (including structured decomposition). The role of algorithms in the problem-solving process. Implementation strategies for algorithms. Testing and debugging strategies.