# INTRODUCTION TO COMPUTATION AND VISUALIZATION

1. Course Contents:

C environment/Structured programming - C Standard Library, C data types, Operators, Expressions, Control statements (loops, break, exit, goto and continue statements), functions, arrays and pointers, dynamic memory allocation, structures, strings, file processing, basics of linked list and tree data structures.

Introduction to OpenGL – OpenGL architecture, OpenGL geometric primitives, Transformations in OpenGL, GLUT programming.

2. Text books:


1. V. Rajaraman, *Computer Programming in C*, Prentice-Hall of India Pvt. Ltd, 2004.
2. Yashwant Kanetkar, *Understanding pointers in C*, BPB Publications, 1997.
3. Mason Woo, Jackie Neider, Tom Davis, and Dave Shreiner. 1999. *OpenGL Programming Guide: The Official Guide to Learning Opengl, Version 1.2* (3rd ed.). Addison-Wesley Longman Publishing Co., Inc., Boston, MA, USA.


3. References


1. Alfred Aho, John Hopcroft, Jeffrey Ullman, Ritchie, *Data Structures and Algorithms*, Addison-Wesley,1983.
2. Donald Hearn and M. Pauline Baker..*Computer Graphics (2nd Ed.): C Version*. Prentice-Hall, Inc., Upper Saddle River, NJ, USA., 1996.
3. Brian Kernighan, Dennis Ritchie, *The C Programming Language* (2nd ed.), Prentice Hall, 1988.