**Course: Advanced Bioinformatics**

**Module title: Computer Programs**

**Module no. : 188**

This module provides introduction to computer programs and some insight into parts of programming languages.

Software: set of instructions to the computer to perform some task for its users. You tell a computer what to do with software programs. Without programs, a computer is just a machine. So we can confirm that through softwares we can communicate with computers.

Programming Languages: They are similar to common languages in a sense that both are used for communication purposes. For common language, purpose is to communicate between two persons on the other hand, programming languages are used for communication of machine with the human. Language and programming languages have two parts. (i) Syntax: every language has a precise notation, i.e. grammar or set of rules which should be followed to rightly understand the language. (ii) Semantics: meaning of the words used.

What to Learn?

Understand the fundamental concepts of high-level programming

Develop algorithms to solve application progr. problems using computer programs

Produce a clear logical set of instructions

Choices for out bioinformatics programs:

* + 1. Biopython-Andrew Dalke
    2. Bioperl - Michele Clamp & Lincoln Stein
    3. BioJava-Matthew Pocock
    4. BioRuby - Toshiaki Katayama
    5. BioC - Steve Searle

And they really do interoperate!