



Algorithms in Bioinformatics

CS 482



Bin Ma

Preface

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This course is officially titled as “Computational Techniques in Biological Sequence Analysis”. However, this is an old title and this course has been offered for over approximately twenty years. It should actually be called “Algorithms in Bioinformatics”. Around 1980, this area has a different name: Computational Biology. You may also hear another name: DNA computing. It is another area, and it does not solve biological problem. What is bioinformatics? It is biology + informatics. Biology is the reason, goal, purpose and informatics is the method.

Biology can be studied at different scales. In old days, biology tries to study organisms, namely living things, such as bacteria, animals. This is because people didn’t have tools to study at a lower level at that time. Now people study organs and tissues. Then people can look into cell level, molecular level. At molecular level, DNA is chain of nucleotide bases. Protein is chain of amino acids.