



## Ngs Workshops

NTHRYS provides Ngs Workshops for interested candidates at Hyderabad, Pune, Chennai, Bengaluru, Mumbai, Delhi, Kolkata, Lucknow, Bhopal, Jaipure and Trivendrum regularly or at their Respective Colleges / Institutions / Companies [Ngs Campus Workshops]. Please refer below for more details including Fee structures and Modules. Workshop module can be customized on request. Please do call / message / whatsapp for more details on 9014935156 [India - +91]

**Eligibility:** Students / Scholars / Professionals belong to respective streams

### Ngs Workshops Module

**Focussing:**

- Essential Computational Skills for NGS
- Tools to study & Analyze NGS Data
- Whole Genome-Seq, Exome-Seq, RNA-Seq & Chip-Seq Data Analysis
- Different approaches for Differential Expression Analysis

## NTHRYS NGS WORKSHOP SCHEDULE

### Day – 1

Introduction to NGS data analysis

10 a.m - 1 p.m

1. Introduction to sequencing technologies from data

- analyst view
- 2. Common data analysis issues
- 3. Application of sequencing technologies

### **LUNCH BREAK**

2 p.m - 4 p.m

- 1. Notations and NGS terminologies
- 2. Introduction to command lines and important commands

### **TEA BREAK**

4:15 p.m - 5 p.m

- 1. Combining commands by piping and redirection

## **Day – 2**

10 a.m - 1 p.m

- 1. Introduction to bioinformatics file formats (e.g. FASTA, BED) and databases (e.g. UCSC)
- 2. Usage of important bioinformatics tool kits (BED tools)
- 3. Raw sequence file formats ( fastq)

### **LUNCH BREAK**

2 p.m - 4 p.m

## Ngs Workshops

1. Preprocessing of raw reads, quality control, adapter clipping, quality trimming
2. Introduction to reading mapping (Alignment methods, Mapping heuristics)

### **TEA BREAK**

4:15 p.m - 5 p.m

1. Read mapping (BWA, BWA-MEM, Bowtie2, STAR, segmehl)

## **Day – 3**

10 a.m - 1 p.m

1. Mapping output (SAM/BAM tools)
2. Usage of important NGS toolkits (samtools)
3. Mapping statistics

### **LUNCH BREAK**

2 p.m - 4 p.m

1. Visualization of mapped reads (IGV, UCSC)
2. DNA variant calling

### **TEA BREAK**

4:15 p.m - 5 p.m

1. Variant Call File Format (VCF)
2. Filtering DNA variants

Ngs Workshops [Ngs Campus Workshops]

Duration: 3 Days

Fee:

1. Students: **Rs 3000/-**
2. PhD Research Scholar / Researchers: **Rs 4500/-**
3. Industry Professionals: **Rs 7500/-**
4. Foreign Nationals: **Rs 8500/-**

Note: Rs 500/- will be charged extra for Onspot Registrations

**What do NTHRYS provide under Ngs Workshops?**

- Ngs Workshops Certificate to Candidates.
- Live Practical exposure to all protocols / Tools in Ngs Workshops module.