

Session wise time schedule

Monday, October 05

9:00 am –10:30 am Session 0: Inauguration,

11:00 am –12:30 pm Session 1: Algorithm Applications, Expert from IIT, Madras

2:00 pm –3:30 pm Session 2: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

4:00 pm –5:30 pm Session 3: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

Tuesday, October 06

9:00 am –10:30 am Session 4: Computational Biology, Expert from IIT, Indore

11:00 am –12:30 pm Session 5: Algorithm Applications, Expert from IIT, Madras

1:30 pm –3:00 pm Session 6: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

Wednesday, October 07

9:00 am –10:30 am Session 7: Algorithm Applications, Expert from IIT, Madras

11:00 am –12:30 pm Session 8: Computational Biology, Expert from IIT, Indore

2:00 pm –3:30 pm Session 9: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

Thursday, October 08

9:00 am –10:30 am Session 10: Computational Biology, Expert from IIT, Indore

11:00 am –12:30 pm Session 11: Algorithm Applications, Expert from IIT, Madras

2:00 pm –3:30 pm Session 12: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

Friday, October 09

9:00 am –10:30 am Session 13: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

11:00 am –12:30 pm Session 14: Expert talk/Hand's on Session Expert talk/Hand's on session by Experts/Research Scholars

1:30 pm onwards Valedictory

After valedictory functions is over Test based on the workshop Research Scholars

Participant registration link :

<https://atalacademy.aicte-india.org/login>

All sessions to be conducted through online mode for which the link would be sent to the participants before the begining of each session.

The certificates shall be issued to those participants who have attended the program with minimum 80 percentage attendance and scored minimum 60 percentage marks in the test.



AICTE Training And Learning (ATAL) Academy sponsored Computational Biology and Algorithms under thrust area Computational Science and Biology

Mathematics Division,
Department of Basic and Applied
Science,
National Institute of Technology,
Arunachal Pradesh-791112,
India

October 05 – October 09, 2020

AICTE Training And Learning(ATAL) Academy

AICTE is committed for the development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development. The Council understands that it is the need of the day to train the young generation in skill sector and faculty & technicians in their respective disciplines. To keep an institute competitive and more productive, faculty training on the latest tools and technologies is vital. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. Accordingly, it was decided to the formation

of AICTE Training And Learning - (ATAL) Academies. As a part of its activities, National Institute of Technology, Arunachal Pradesh along with AICTE Training and Learning (ATAL) Academy will conduct Computational Biology and Algorithm programme from 5th to 9th October, 2020 at National Institute of Technology, Arunachal Pradesh through online mode.

<https://atalacademy.aicte-india.org/>

About NIT, Arunachal Pradesh

The National Institute of Technology, Arunachal Pradesh was established in the year 2010 established by MHRD, Government of India. It is one of the 31st National of Technology in India and is recognized as an Institute of National Importance. Presently the institute is running in project phase with yearly intake of 190 undergraduate students in five Engineering, Computer Science and Engineering, Electrical Engineering, Electronic and Communication Engineering and Mechanical Engineering. Each department is equipped with well-established state of the arts laboratories to cater holistic development of the students. The faculty and student of the institute are also engaged in various R and D projects sponsored by various Government agencies and the current value of such running project is around 5 Crore for 25 projects. The institute is in top 200 position among the technical institutions ranked by NIRF, MHRD, Government of India, India.

<https://www.nitap.ac.in/>

Director

Dr. Pinakeswar Mahanta,
Professor (IIT, Guwahati) and Director,
National Institute of Technology, Arunachal Pradesh,
Arunachal Pradesh-791112,
India.

https://www.nitap.ac.in/page_details?name=Director&page=c644585767

https://www.nitap.ac.in/department/faculty_profile?name=pinakM&dept=89f0915482

About the Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh

Department of Basic and Applied Science was part of Basic Science and Humanities and has been established right at the inception of the Institute in 2010. The Department was renamed as Basic and Applied Science (BAS) combination in 2016. Currently, the Department comprises of disciplines of Physics, Chemistry, Mathematics and Biotechnology. The Department has total ten numbers of faculty members and having specialized in advance areas of Physics, Chemistry, Mathematics and Biotechnology. The Department has a rich heritage of teaching, research (aforesaid subjects) and administration with regular responsible positions like Dean's (R & D, SW, FW, A & E), warden's held by faculty members. The department is striving to establish new academic and research disciplines while embracing interactions with the real world through a strong emphasis on fundamental research. The Department got a number of projects since its inception from various sponsoring agencies namely the DST, CSIR, ICMR and support worth of over one and half crores. The Department currently offers M Sc (Applied Physics) and Ph.D. program with more over 20 research scholars on roll under institute self finance, institute fellowship, TEQIP fellowship, Project fellow categories. The Department thrives to diversify into more interdisciplinary area and in near future proposes to open new courses relevant to present demand and local aspirations.

<https://www.nitap.ac.in/department/department?name=Basic-&Applied-Science&dept=381c47c0a0>

Head of the Department

Dr. Susanta Maity,
Assistant Professor and HOD,
Department of Basic and Applied Science,
National Institute of Technology, Arunachal Pradesh,
Arunachal Pradesh-791112,
India.

Content of the FDP

The workshop will introduce the participants to the following topics at an Introductory level

Algorithms and Applications Introduction, DNA sequence analysis, DNA Databases - Protein structure and function - Protein sequence databases, sequence alignment - Global and local alignment - Multiple sequence alignment - Protein sequence analysis- Protein secondary structures - Deep learning tools in sequence analysis.

Computational Biology Development and applications of coarse-grained (CG) methods for biomolecules and mechanistic study of large bimolecular systems - Modeling of biomolecular recognition - Free energy simulations - Modeling host-pathogen interactions - High end computation for generated big data

Coordinator

Dr. A. Vanav Kumar, Assistant Professor, Mathematics Division, Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh, Yupia, Arunachal Pradesh - 791112, India. Ph.- 9442559321 Email. - vanavkumar.a@gmail.com; vanav@nitap.ac.in

Target Participants

As the field being highly interdisciplinary and holds potential for high growth, the workshop is open to all the participants who are interested in Genome Computations, Bioinformatics, Applications of Mathematics in Bioinformatics and Computational Biology.

Expert (Technical) lectures will be drawn from the following institutes

- IIT, Madras, Chennai, TamilNadu- 600036;
- IIT, Indore, Madhya Pradesh - 453552;