

## CERTIFICATE PROGRAM REPORT 2019-20

COLLEGE

IQAC ACTIVITY No: SVC/CERTIFICATE COURSES/ 2019-20

### NAME OF THE ACTIVITY: Add on Course/ Certificate Course

DATE	FACULTY	DEPARTMENT/COMMITTEE	COORDINATOR NAME
September 2020- January 2021	Science	Zoology + Biochemistry	<b>Dr. N. Latha ( Biochemistry)</b> <b>Dr. Anita Verma ( Zoology)</b> <b>Dr. Mansi Verma ( Zoology)</b>
TIME	MODE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
Every Saturday	Online mode- Google meet	<b>42</b>	Indoor
<b>SUPPORT/ASSISTANCE:</b>	Offered by Sri Venkateswara College, the certificate course is a 4 month part time self-financing course (Registration fees : Rs. 3500.00 ) that aims to provide skill set in the area of Bioinformatics & Computational Biology		


### BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. – I/V/VII)

TOPIC/SUBJECT OF THE ACTIVITY	<b>Certificate Program in Bioinformatics &amp; Computational Biology (CBC) 2020</b>
OBJECTIVES	<p>It is well recognized that information technology based scientific approach has become a great asset in both academia and Industry. The advancement in next-generation sequencing technology has led to a rapid upsurge in the amount of genomic data for analysis. The data comprises of only the nucleotides that make the DNA but has huge functional significance for determining the characteristics and role of microbes. Considering the importance of this data there is a need for organizing a training program for students. The Certificate program ( Add on Course) in Bioinformatics &amp; Computational Biology aims to create skilled manpower with the following objectives –</p> <ol style="list-style-type: none"> <li>1. To create an awareness with respect to the basic tools and techniques used in bioinformatics</li> <li>2. To provide complete hands-on-training in the basic tools and techniques</li> <li>3. To inspire and promote biology teaching through bioinformatics to all life sciences students</li> </ol>
METHODOLOGY	<p>Experts from both Academia and Industry were invited to interact with students. Coordinators also worked as resource persons The following coursework was framed:</p> <p><b>Course Content</b></p> <p><b>Theory</b></p> <ol style="list-style-type: none"> <li>1. <b>Basics in Bioinformatics</b> – Scope of Bioinformatics, Databases, Sequence Analysis, Phylogenetics</li> <li>2. <b>Genomics</b> – Gene Organization, Introduction to NGS and data assembly, Gene Prediction tools,</li> <li>3. <b>Molecular Modeling &amp; Simulation</b> – Protein Structure Prediction, Validation tools</li> <li>4. <b>Drug Discovery &amp; Development</b> - Computer Aided Drug Design (CADD), Personalized Medicine, Drug Databases</li> <li>5. <b>Applications of Bioinformatics</b> - Big Data Analytics, Systems Biology, PPIN</li> </ol> <p><b>Hands-on Session</b></p> <ol style="list-style-type: none"> <li>1. <b>Biological Databases</b> – Protein Databases, Nucleotide Databases, Drug Databases</li> </ol>

	<p>2. <b>Sequence analysis</b> – Pairwise &amp; Multiple Sequence Alignment</p> <p>3. <b>Phylogenetic analysis- gene based, genome based</b></p> <p>4. <b>Protein Modelling</b></p> <p>5. <b>CADD</b> – Ligand Preparation, Virtual Screening by Docking</p>
OUTCOMES	<p>During online mode, students learnt about various basic and advanced tools in bioinformatics. Students learnt about what are databases, how databases are curated, what is the need of databases, DNA databases and Protein databases. Moving further, students got aware about sequence retrieval using these databases. The most fascinated part for them was to visualize protein structures in 3D format. Hands on session proved to be really boon for students as they could perform the exercises alongwith with resource persons in online mode during pandemic. Students also got opportunity to interact with experts in the area of Bioinformatics &amp; Computational Biology:</p> <ol style="list-style-type: none"> <li>1. Prof Y Singh, Dean ( Research), University of Delhi</li> <li>2. Prof Andrew Lynn, School of Computational &amp; Integrative Sciences, JNU, New Delhi</li> <li>3. Dr. N. Latha, Coordinator, Bioinformatics Centre , Sri Venkateswara College</li> <li>4. Dr. Nidhi Jatana, IGIB , Delhi</li> <li>5. Prof Arun Jagannath, Department of Botany, University of Delhi</li> <li>6. Dr. Mansi Verma, SVColege</li> <li>7. Prof. Rup Lal, TERI, New Delhi</li> <li>8. Dr. Utkarsh Sood, TERI</li> <li>9. Dr. Vipin Gupta, Phixgen Pvt. Ltd.</li> <li>10. Dr. Surojit Sandhu, Advent Informatics, Pune</li> <li>11. Dr. Gitanjali Yadav , NIPGR, New Delhi</li> </ol> <p>Overall, the Certificate Course was an enriching experience for students to learn bioinformatics.</p>

**PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):**

Notice & Letters	<b>Student list of participation</b> ✓	<b>Activity report</b>	<b>Photos</b>	Feedback form ✓
<b>Feedback analysis</b>	News clip with details	Certificate	Any other	
IQAC Document No:		Criterion No: I, V, VII		Metric No:
Departmental file no: SVC/Certificate Course		IQAC file No;		

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
Dr. N. Latha Dr. Anita Verma Dr. Mansi Verma	Dr. N. Latha Dr. Anita Verma Dr. Mansi Verma	 Dr. N. Latha Coordinator, IQAC Coordinator, IQAC Sri Venkateswara College (University of Delhi) Dhaula Kuan, New Delhi-110021

## Patron

**Dr.S. Venkata Kumar**  
Principal ( Ag)  
Sri Venkateswara College

## Coordinators

**Dr. N.Latha**  
Coordinator  
Bioinformatics Centre  
& Associate Professor  
Department of Biochemistry  
Sri Venkateswara College

**Dr. Anita Verma**  
Associate Professor  
Department of Zoology  
Sri Venkateswara College

**Dr. Mansi Verma**  
Assistant Professor  
Department of Zoology  
Sri Venkateswara College

For further details  
contact

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# LEARN NOW!

## From Concept to Applications

### Topics covered

Biological Databases  
Sequence Analysis  
Phylogenetics  
Molecular Modeling  
Genomics

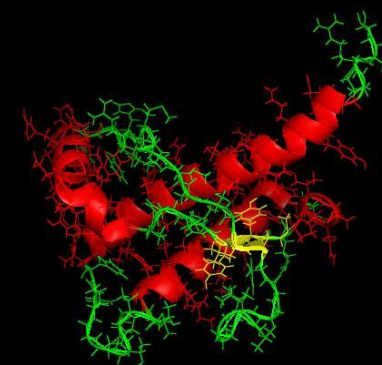
Computer Aided Drug Discovery  
Biocomputing

**Biology Meets  
Big Data**



Sri Venkateswara College  
( University of Delhi)  
*offers an add on course*

# CERTIFICATE PROGRAM IN BIOINFORMATICS & COMPUTATIONAL BIOLOGY (CBC)



## LEARNING OUTCOMES

- To access, use and analyze public domain bioinformatics tools and softwares
- Learn to identify, compile, analyze, and communicate complex biological and genetic data for initiatives in areas such as human genome analysis, disease research, and drug discovery and development.

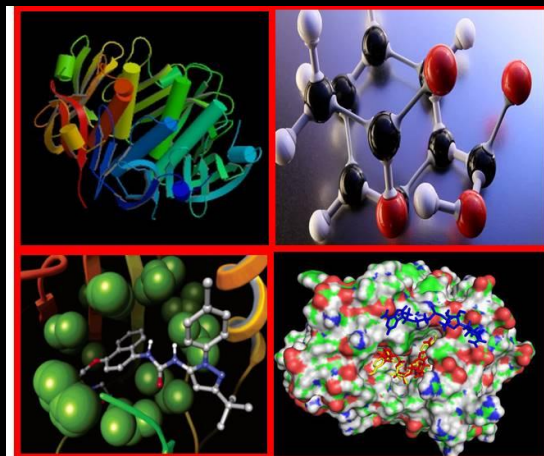
## Build your Computational & Scientific skills

## REGISTRATION DETAILS & FEE

COURSE FEE : Rs 3500

### REGISTRATION

- Register online by September 10, 2020
- Applications available at [www.svc.ac.in](http://www.svc.ac.in)
- Payment can be done online using credit card/debit card by payment gateway



## HIGHLIGHTS:

### ELIGIBILITY

This course is open to all undergraduate students pursuing degree program in Biochemistry, Biological Sciences, Botany, Zoology, Biomedical Sciences, Biotechnology, Chemistry and Physics

### COURSE DURATION

This course will be conducted on Saturdays and in holidays/ mid semester break. Program will run for 4 months in online mode ( Sep to Dec)

### HIGHLIGHTS

- Lectures and hands-on sessions by experts from both academia and industry
- Lectures by eminent speakers from DU, JNU, IIT Delhi, IIIT Delhi, TERI, CSIR-IGIB, NII, NIPGR and more.
- Certificates will be provided on successful completion of evaluation at the end of course.

**NUMBER OF SEATS : 30**

**LIMITED SEATS  
REGISTER NOW**

THE COLLEGE DOES NOT TAKE  
RESPONSIBILITY FOR ADJUSTMENT OF  
DATES FOR CLASSES/EXAMINATION



*SRI VENKATESWARA COLLEGE*  
( UNIVERSITY OF DELHI )

*Inauguration*

CERTIFICATE PROGRAM  
IN BIOINFORMATICS &  
COMPUTATIONAL BIOLOGY

SEPTEMBER 12, 2020

Inauguration of  
**Certificate Program in Bioinformatics &  
Computational Biology**

in the  
august presence of

**CHIEF GUEST**

***Prof Yogendra Singh***

***Dean Research ( Life Sciences), University of Delhi***

**INAUGURAL LECTURE**

***Prof Andrew M. Lynn***

***School of Computational & Integrative Sciences  
Jawaharlal Nehru University , Delhi***

***Dr. S. Venkata Kumar***

**Principal ( Ag) , Sri Venkateswara College**

**COURSE COORDINATOR (s)**

**Dr. Mansi Verma**  
**Assistant Prof.**  
**Dept of Zoology**

**Dr. N. Latha**  
**Coordinator , Bioinformatics Centre**  
**& Asso Prof. Dept of Biochemistry**

**Dr. Anita Verma**  
**Associate Prof.**  
**Dept of Zoology**

Join Gmeet link : <https://meet.google.com/rkc-ydee-usa> **(Sept12, 10 am)**

**Students Enrolled for the Add on Course**  
**Certificate Program in Bioinformatics & Computational Biology (CBC) 2020**

S.No.	Roll Number	Applicant's Name	Email	Mobile Number
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**SRI VENKATESWARA COLLEGE  
( UNIVERSITY OF DELHI)  
CERTIFICATE PROGRAM IN  
BIOINFORMATICS & COMPUTATIONAL  
BIOLOGY**

**VALEDICTORY LECTURE**

**DATA SCIENCES IN BIOLOGY**



***Dr. Gitanjali Yadav  
NIPGR, New Delhi***

Join using the Google link  
<https://meet.google.com/rkc-ydee-usa>

**JAN 15, 2021 AT 5 PM**

Coordinators:  
Dr. Latha Narayanan  
Dr. Anita Verma & Dr. Mansi Verma

Ag. Principal  
Dr.S. Venkata Kumar



# Sri Venkateswara College

University of Delhi

## ***CERTIFICATE OF PARTICIPATION***

This is to certify that

XYZ

of \*Course\*, \*college name\* has successfully completed the

**CERTIFICATE PROGRAM IN BIOINFORMATICS AND**

**COMPUTATIONAL BIOLOGY**

offered by Sri Venkateswara College from September 2020 to January 2021.

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DR. MANSI VERMA  
COORDINATOR

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DR. ANITA VERMA  
COORDINATOR

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DR. N. LATHA  
COORDINATOR

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PROF. C. SHEELA REDDY  
PRINCIPAL