



IQAC/

Date:

INFORMATION FOR ACADEMIC AUDIT OF THE DEPARTMENT
(Please provide information for Academic Session 2019-20)

1. Name of the Department: Centre for Computational Biology and Bioinformatics
2. Year of establishment: 2012
3. Courses offered:

Undergraduate	Post Graduate
	M. Sc. Computational Biology and Bioinformatics

4. Courses introduced during last year:

Undergraduate	Post Graduate	Add-on/Value Added
	CBB 538 - Data Science	
	CBB539 - R for Data Science	
	CBB540 - High Throughput Sequencing: data analysis and application	

5. Does the Department have Academic flexibility? If yes since when?: Yes Since 2012

6. Interdisciplinary programs offered and departments involved:

Name of the Course/Paper	Interdisciplinary paper shared with department
History Of science & Technology In India (CBB436)	YES
Basics of Machine Learning (CBB 416 A)	YES

7. Courses conducted in collaboration with other Universities and Institutions: NIL
8. Details of programmes discontinued, if any, with reasons: NA
9. Examination System: Annual/ Semester/Choice Based Credit System/ Credit and Grading system/ any other system, specify: Semester/CBCS
10. Participation of the department in the curriculum development for courses offered by the Departments/University.

Name of the faculty	Course/Curriculum
Dr. Mahesh Kulharia	Chairman BoS of CCBB
	Member Board of Studies, Department of Animal Science
	Member of School Board, School of Life Science
Dr. Vikram Singh	Member Curriculum Development Committee, Centre for Computational Biology and Bioinformatics
	Member Board of Studies, Department of Environmental Sciences
	Member Board of Studies, Department of Plant Science
	Member Board of Studies, Department of Animal Science
	Member Board of Studies, Department of Chemistry

11. Has the department periodically updated the syllabus or introduced any syllabus other than the one used by university for PG course at the onset? **YES**

12. Number of teaching posts sanctioned, filled and vacant.

Designation	Sanctioned	Filled			Filled under CAS
		P	A	G	
Professor	01	00	00	00	
Associate Professor	02	01	00	00	
Assistant Professor	04	02	00	02	
Total	07	03	00	02	

P=Permanent, A=Adhoc, G=Guest

13. Faculty profile with name, qualification, designation, experience, nature of appointment (confirmed/ probation/Ad-hoc/Guest) Appointed on Sanctioned Post:

Name	Gender	Designation	Qualifications	Teaching/ Research Experience	Nature of appointment
Dr. Mahesh Kulharia	Male	Associate Professor	PhD	14+ Years	Permanent
Dr. Vikram Singh	Male	Assistant Professor	PhD	8+ Years	Permanent

Dr. Shailender Kumar Verma	Male	Assistant Professor	PhD	8+ Years	Permanent
Dr. Gagan Deep Singh	Male	Resource Person	PhD	2+	Guest
Mr. Satpal Singh	Male	Resource Person	SET	3+	Guest
Dr. Rishi Thakur	Male	Resource Person	PhD	1+	Guest

14. Highest Qualification of the teaching staff:

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent							
Ph.D.			01		02		03
M.Phil							
PG							
Any Other							
Contract/Resource: NA							
Ph.D.					02		02
M.Phil							
PG					01		01
Any Other							
Guest/Visiting: NA							
Ph.D.							
M.Phil							
PG							
Any Other							

15. Diversity of Faculty:

Number of Actual Strength (2019-20) =

Teaching faculty	Number	%
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From the Same University	00	00%
From Other Universities within the State	00	00%
From Other States	03	100%
From Outside the Country	00	00%

16. Number of faculty who have been awarded M.Phil., Ph.D., D.Sc. / D.Lit.: NA

17. List of Visiting Fellows/Teachers, Adjunct and Emeritus Professors, (2019-20).

Name	Designation	Institution

18. Percentage of classes taken in each semester by faculty (programme- wise information):

Name of Course	Name of Paper	% Class Taken by
M. Sc. Computational Biology and Bioinformatics	CBB411 Introduction PERL programming	98 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB413 Practical course on PERL	100 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB518 Elements of Systems Biology	100 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB501 Algorithms in Computational Biology	100 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB522 Element of Synthetic Biology	98 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB436 History of Sciences and Technology in India	95 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB499A M. Sc. Project	96 % (by VS)
M. Sc. Computational Biology and Bioinformatics	CBB 523 Practical Course on System Biology	(100% by VS)
M. Sc. Computational Biology and Bioinformatics	CBB 507	(100% by VS)
M. Sc. Computational Biology and Bioinformatics	CBB 405 Basics of Bioinformatics	(100% by GS)
M. Sc. Computational Biology and Bioinformatics	CBB 414 Practical course on Bioinformatics tools	(100% by GS)
M. Sc. Computational Biology and Bioinformatics	CBB 515 Computer Aided Drug Discovery	(100% by GS)

M. Sc. Computational Biology and Bioinformatics	CBB 428	(100% by GS)
M. Sc. Computational Biology and Bioinformatics	CBB 522 Element of Synthetic Biology	(100% by RP)
M. Sc. Computational Biology and Bioinformatics	CBB 429 Practical Course on Structure prediction and Modeling	(100% by RP)
M. Sc. Computational Biology and Bioinformatics	CBB 410 Computational Methods in Structure Analysis	(100% by RP)
M. Sc. Computational Biology and Bioinformatics	CBB 418 Biomolecules	(100% by SS)
M. Sc. Computational Biology and Bioinformatics	CBB 516 Molecular Evolution and Biodiversity	(100% by SS)
M. Sc. Computational Biology and Bioinformatics	CBB 431 Bioanalytical Techniques	(100% by SS)
M. Sc. Computational Biology and Bioinformatics	CBB 540 High Throughput Sequencing Technologies: data analysis and application	(100% by RT)
M. Sc. Computational Biology and Bioinformatics	CBB 402 Modern Biology	(100% by RT)
M. Sc. Computational Biology and Bioinformatics	CBB 403 Introduction to Statistics and Probability	(100% by RT)
M. Sc. Computational Biology and Bioinformatics	CBB 416A Basics of Machine Learning	(97% by MK)
M. Sc. Computational Biology and Bioinformatics	CBB 503 Molecular Modeling and Dynamics	(95% by MK)
M. Sc. Computational Biology and Bioinformatics	CBB 513 Chemoinformatics	(98% by MK)
M. Sc. Computational Biology and Bioinformatics	CBB 504 Genomics and Proteomics	(96% by SV)
M. Sc. Computational Biology and Bioinformatics	CBB 527 Plant Bioinformatics	(95% by SV)

19. Programme-wise Student-Teacher Ratio:

S. No.	No. Name of the Programme / Course	Sanctioned Student Intake	Teacher-Student Ratio (Formula- Students: teachers)
01	M. Sc. Computational Biology and Bioinformatics	66	66:3

20. Number of academic support staff (technical) and administrative staff sanctioned, filled and vacant:

Sr. No.	Posts	Sanctioned posts	Filled		Total
			Permanent	Contractual	
1	Laboratory Assistant	NA	00	00	00
2	Laboratory Attendant	NA	01	00	01
3	Ministerial Staff	NA	0.5	00	0.5
4.	Others Technical Assistant	NA	0.5	00	0.5

21. Thrust areas of research as identified by the department: (Please fill your thrust area)

Molecular Dynamics and Simulation in Biology, Structure Biology, Evolution, Systems Biology, Networks in Biology, Plant Metallomics, Metal Biology

22. Information about research grants, projects completed and ongoing during last year:

a) From National funding agencies (like UGC, CSIR, DST, DBT, DST-FIST; CSIR, UGC-SAP/CAS, DAE, DBT, BRNS, ICSSR, AICTE, etc):

Sr. No.	Name of the Principle Investigator (Co-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakh)	Status of Project (Submitted/ Ongoing)	Remarks if any (Publication/ Award/ Patent)

Note: Please enclose a copy of Report Summery, Utilization Certificate and relevant documents

b) From International funding agencies:

Sr. No.	Name of the Principal Investigator	Title of the Project	Funding Agency, Duration	Amount (in Lakh)	Status of Project (Submitted/	Remarks if any (Publication/

	(Co-investigator)		& date of sanction		Ongoing)	Award/Patent)

Note: Please enclose a copy of Report Summery, Utilization Certificate and relevant documents

c) From Corporate Houses/Industries:

Sr. No.	Name of the Principal Investigator (Co-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakh)	Status of Project (Submitted/Ongoing)	Remarks if any (Publication/Award/Patent)

Note: Please enclose a copy of Report Summery, Utilization Certificate and relevant documents

23. Funds received at University level through Corpus fund/Seed Money:

Sr. No.	Name of the Principle Investigator (Co-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in INR)	Status of Project (Submitted/Ongoing)	Remarks if any (Publication/Award/Patent)

Note: Please enclose a copy of Report Summery, Utilization Certificate and relevant documents

24. Research facilities available in the department and recognition received, if any?

1. High Performance Computational Facilities dedicated for Bioinformatics Research
2. 28 Personal Computers
3. 17 Workstations

25. Special research laboratories sponsored by/created by industry or corporate bodies.

26. Details of patents filed & granted and income generated:

NA

27. Consultancy services provided, name of the teacher/s and income generated:

Sr. No.	Year	Name of the teacher	Nature of consultancy	Funds generated (In Rs)

28. Publications:

Sr. No.	Papers published in UGC listed journals	Papers published in peer reviewed	Monographs, Books, Chapters in books	Citations	h-index*	Impact factor range/Average Impact factor*

		journals (Not in UGC- LIST	With ISBN no.	Without ISBN no.			
1	Ankita Sharma, Dixit Sharma, Shailender Kumar Verma "In silico identification of copper-binding proteins of Xanthomonas translucens pv. undulosa for their probable role in plant-pathogen interactions" Physiological and Molecular Plant Pathology (Elsevier)				05	NA	1.646
2	Dixit Sharma, Ankita Sharma, Birbal Singh, Shailender Kumar Verma "Bioinformatic Exploration of Metal-Binding Proteome of Zoonotic Pathogen Orientia tsutsugamushi" Frontiers in Genetics				05	NA	3.517
3	Ankita Sharma, Dixit Sharma, Shailender Kumar Verma "Zinc binding proteome of a phytopathogen Xanthomonas translucens pv. undulosa" Royal Society Open Science				05	NA	2.515
4	Gagandeep Singh, Vikram Singh & Vikram Singh "Construction and analysis of an interologous protein-protein interaction network of Camellia sinensis leaf (TeaLIPIN) from RNA-Seq data sets" Plant Cell Reports, Springer				07	NA	3.49
5	Neha Choudhary & Vikram Singh "Insights about multi-targeting and synergistic neuromodulators in Ayurvedic herbs against epilepsy: integrated computational studies on drug-target and protein-protein interaction networks" Scientific Reports, Nature				18	NA	4.01

* Based on Scopus/ Web of science

29. #Details of teachers invited as resource persons for Refresher courses, Orientation courses, Seminars, Workshops, Conferences at state, national and international levels.

Name of Faculty	Resource Person for (Refresher courses, Orientation courses, Seminars, Workshops, Conferences)	Levels (National/ International/ State/University/College)
Dr. Vikram Singh	Orientation Course on Introduction to network pharmacology at Government College of Teacher Education, Dharamshala	State
Dr. Vikram Singh	Orientation Course on Network pharmacological evaluation of anti-epileptic Ayurvedic herbs at Government College of Teacher Education, Dharamshala	State

#Format for para 29

Participated/Invited as Resource person and presented/Judged the topic “(Title of the topic)” under the session/sub-session “(Name, if any)” in state/national/international workshop/conference/seminar on “(Title of the event).” Organised by (Department/College) held on (Date/month/year), at (Institution/University).

30. #Details of teachers participated in Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.(participant, presented paper, chaired the session)

Name of Faculty	Participation in (Refresher courses, Orientation courses, Seminars, Workshops, Conferences)	Levels (National/ International/ State/University/College)

#Format for para 30

Participated in state/national/international workshop/conference/seminar on “(Title of the event).” Organised by (Department/College) held on (Date/month/year), at (Institution/University).

31. Details of teachers presented paper Seminars, Workshops, Conferences at national and international levels.(participant, presented paper, chaired the session) in an academic year.

Name of Faculty	Participation in (Refresher courses, Orientation courses, Seminars, Workshops, Conferences)	Levels (National/ International/ State/University/College)
Dr. Shailender Kumar Verma	Investigating genetic variability for mineral micronutrients in wheat through interspecific hybridization and QTL mapping of old landraces at 1st International Wheat Conference 2019 held at Saskatoon, Saskatchewan, Canada	International

#Format for para 31

Presented a paper entitled as “(Title of the paper/poster/oral presentation)” in state/national/international workshop/conference/seminar on “(Title of the event).” Organised by (Department/College) held on (date/month/year), at (Institution/University).

32. Participation of teachers in various academic activities as members of committees at University level, State level, National level, International level bodies. (give details)

Name of Faculty	Nature of Participation (Activity)	Levels (National/ International/ State/ University/ College)
Dr. Mahesh Kulharia	Director, CCBB	University
Dr. Mahesh Kulharia	Chairman, BoS of CCBB	University
Dr. Mahesh Kulharia	Member, Physical Verification of assets in the School of Life Sciences	University
Dr. Vikram Singh	Member, Academic Council	University
Dr. Vikram Singh	Member, Curriculum Development	University

	Committee, Centre for Computational Biology and Bioinformatics	
Dr. Vikram Singh	Member, Board of Studies, Department of Environmental Sciences	University
Dr. Vikram Singh	Member, Board of Studies, Department of Botany	University
Dr. Vikram Singh	Member, Board of Studies, Department of Zoology	University
Dr. Vikram Singh	Member, Board of Studies, Department of Chemistry	University
Dr. Vikram Singh	Member, Swachh Bharat Abhiyan, CUHP-Unit	University
Dr. Vikram Singh	Member, Himachal Pradesh Kendriya Vishwavidyalaya Sahkari Samiti	University
Dr. Vikram Singh	In-charge, Computational Biology and Bioinformatics Lab	University
Dr. Vikram Singh	Member, Committee for promotion of Hindi language in Science subjects	University
Dr. Vikram Singh	Member, University-Industry Interface	University
Dr. Vikram Singh	Member, Research Progress Monitoring Committee, CCBB, SoLS	University
Dr. Vikram Singh	Member, Proctorial Board	University
Dr. Shailender Kumar Verma	In charge Swachhta Pakhwada, Clean India Mission, 15-31 January 2020 for Centre for Computational Biology and Bioinformatics	University
Dr. Shailender Kumar Verma	Faculty In Charge, Computational Biology and Bioinformatics- lab	University
Dr. Shailender Kumar Verma	Member, Screening committee member of PhD applications in Centre for Computational Biology and Bioinformatics	University

33. Percentage of participation of full-time teachers in various bodies of the Universities/ Other Colleges, (eg. BoS and Academic Council during the last year)

Data requirement:

- Number of teachers participated = 3
- Name of the body in which full time teacher participated

Academic Council, Board of Studies, Centre for Computational Biology and Bioinformatics

Board of Studies, Department of Environmental Sciences, Board of Studies, Department of Animal Science, Board of Studies, Department of Plant Science, Board of Studies, Department of Chemistry Faculty Recruitment Process.

• Total number of teachers = 3

Formula= $\frac{\text{Number of teachers participated}}{\text{Total Number of teachers}} \times 100$

Documents: Enclose scanned copies of the certificate supporting the participation of teachers

34. Details of teachers appointed/nominated on Editorial Boards at university, state, national and international levels.

Sr. No.	Name of the teacher	Name of Editorial Boards	Level of board	Name of Institution

35. Awards/Prizes and recognitions received by teachers at University, State, National and International level:

Sr. No.	Name of the teacher	Nature of Award	Level of Award	Money received if any (In Rs)
01	Dr. Shailender Kumar Verma	The Royal Society (London) Newton International Fellowship to work at the John Innes Centre, United Kingdom	International	NA

36. Awards and Prizes received by students at University, State, National and International level:

Sr. No.	Name of the Student	Name of the activity	Nature of Award	Level of Award	Money received if any (In Rs)

37. Details of Seminars/ Conferences/Workshops organized by department at University, State, National and International level and the source of funding with details:

Name of Conference/ Seminars / Workshops	Funding agency and funds received		No. of Participants		University/State/ National/ International	Dates
	Internal	External	Internal	External		

38. Student profile programme-wise at UG and PG (2019-20)

39. Diversity of Students : (Year-wise)

Name of the Programme	Course	Year	Total number	% of students from the same state	% of students from other State	% of students from other countries
UG		I				
		II				
		III				
PG		I (2019-2021)	27	100	00	00
		II (2018-2020)	18	100	00	00

40. Year-wise results of students at UG and PG:

UG/PG	Year	Appeared	Passed	Pass %	Grade %			
					O	A	B	C
PG	2019	23 (2017-19 Batch)	23	100	NA	NA	NA	NA
PG	2020	12 (2018-20 Batch)	12	100	NA	NA	NA	NA

41. Student progression/ placement record: Number/ percentage of students proceeded for higher studies Number/percentage of students placed:

Year	% proceeded for higher studies			% of students placed
	UG to PG	PG to Ph.D./ M.Phil	Professional	
UG				
PG	--			

42. Number of students awarded M.Phil., Ph.D., Degree (in case of any faculty is Co-supervisor):

Year	M.Phil	Ph.D.	Title of the Research	Parent University	Male	Female	Total
2019	00	01	Studies On Iron Zinc And Copper Binding Proteins From		00	01	01

b) Departmental Library (books, journals etc.)	:	
c) Computers and Internet facilities for staff	:	Available
d) Total number of class rooms	:	01
e) Class rooms with ICT facility	:	01
f) Students' laboratory	:	01
g) Research laboratories	:	01
h) Smart class room	:	00
i) Any other facility LCDs	:	00

46. List of faculty members doing post-doctoral Research

Sr. No.	Name of the Faculty	Institute	Research Topic
1			

47. Number of students getting financial assistance from the university/state / central government / NGOs/ Trusts/ Other sources

Sr. No.	Name of the Student	Source of Funding	Nature of Financial assistance	Level of Financial assistance	Money received (In Rs)
01	Dr. Ankita Sharma	ICMR	RA	National	Rs 6,28,756
02	Mr. Dixit Sharma	ICMR	SRF	National	Rs 4,73,600
03	Mr. Vikram	CSIR	JRF	National	Rs 4,27,680
04	Ms. Neha	ICMR	SRF	National	Rs 4,73,600
05	Ms. Himisha Dixit	UGC	UGC-Non NET	National	Rs 96,000
06	Mr. Ashish	UGC	UGC-Non NET	National	Rs 96,000

48. Curricular Aspects:

a) Does the faculty take initiative in curriculum development process?

Sr. No.	Name of the Faculty	Type of curriculum development
1	Dr. Mahesh Kulharia	Introduction of new courses and inclusion of advance topics in previously introduced courses
2	Dr. Vikram Singh	Introduction of new courses and inclusion of advance topics in previously introduced courses
3	Dr. Shailender Kumar Verma	Introduction of new courses and inclusion of advance topics in previously introduced courses

b) Is curriculum suitable to make students globally competitive in the subject? If yes, substantiate. YES

Department offers the courses that having global demands and provides skill development of the student's i.e.

- Practical Course on Structure Prediction and Modeling
- Algorithms in Computational Biology
- Computational Methods in Structure Analysis
- Molecular Modeling and Dynamics
- Genomics and Proteomics
- Basics of Machine Learning
- Element of Synthetic Biology
- Practical Course on System Biology
- Chemoinformatics
- Plant Bioinformatics
- Modern Biology
- Introduction to Statistics and Probability
- Bioanalytical Techniques
- Biomolecules
- Basics of Bioinformatics
- Practical course on Bioinformatics tools
- Introduction PERL programming
- Practical course on PERL
- Elements of Systems Biology
- Computer Aided Drug Discovery
- Molecular Evolution and Biodiversity
- High Throughput Sequencing Technologies: data analysis and application

c) Does the department offer program with sufficient no. of electives options. YES

d) While framing curriculum, is feed-back taken from stakeholder's viz. Students/Alumni/Parents/Employers considered? YES

e) What is the frequency of curriculum revision? (3/4/5 years or more or less) Less than 3 yrs

f) Does the curriculum have emerging thrust areas, including interdisciplinary areas? (If yes, elaborate). YES

Department offers the courses that having global demands and provides skill development of the students

49. Teaching-Learning, Evaluation:

- Number of teachers preparing & following Academic Teaching plan *ask all to submit one

S. No.	Name of the Faculty	Curriculum plan submitted (Yes/No)
1	Dr. Mahesh Kulharia	Yes
2	Dr. Vikram Singh	Yes
3	Dr. Shailender Kumar Verma	Yes

4	Mr. Gagandeep Singh	Yes
5	Mr. Satpal Singh	Yes

- The details of teachers who use the following teaching methods:
 - Interactive lecture method using blackboard, Group discussions, Problem solving, Seminars.
 - Use ICT methods to support lectures.

S. No.	Name of the Faculty	Method of teaching
01	Dr. Mahesh Kulharia	Power Point Presentation, Digital Animation and Recorded Videos
02	Dr. Vikram Singh	Power Point Presentation, Digital Animation and Recorded Videos
03	Dr. Shailender Kumar Verma	Power Point Presentation, Digital Animation and Recorded Videos
04	Mr. Gagan Deep Singh	Power Point Presentation, Digital Animation and Recorded Videos
05	Mr. Satpal Singh	Power Point Presentation, Digital Animation and Recorded Videos
06	Dr. Rishi Thakur	Power Point Presentation, Digital Animation and Recorded Videos

- Does the Department have Peer review processes? If yes, are the suggestions effectively used to improve the teaching quality?

NO

- Does the department have any mechanism to ensure that entire syllabus is completed? Enclose relevant documents.

YES

- Do you offer Bridge/Remedial courses? If yes, Give details.

YES

- What is the method for conducting internal evaluation?

MID-Term Examination, Presentations, Class Room Seminars

50. Teacher Performance:

- Whether the performance of the teacher assessed by the students? If yes, are The feedback reports analysed and suggestions communicated to teachers? Yes and Yes

- Number of teachers getting a) Very Good - All 03 b) Good - All 03 c) Average - All 03 remarks from students.
- Whether suggestion boxes are kept in the department to get suggestions from students on infrastructural facilities available in the department? NO
- Are the suggestions received from students used for improvement of facilities? YES
- Do teachers submit Self-Appraisal Reports? Are these reports appraised by TIC and forwarded to the Principal Office with comments? YES
- What is the Departmental average API _____? How many teachers have API > Average API - 02
- What is the individual faculty wise h index?

S. No.	Name of the Faculty	h index
01	Dr. Mahesh Kulharia	10
02	Dr. Vikram Singh	06
03	Dr. Shailender Kumar Verma	09

- Give details of “beyond syllabus scholarly activities” of the department.

51. List the distinguished alumni of the department (maximum 10):

S. No.	Name of the Alumina	Current Status/Position
1	Dr. Omkar	Post Doctorate Fellow NIH-NCI
2	Dr. Padmini	Post Doctorate Fellow IIT Bombay
3	Dr. Arti	Faculty at Dharamshala College
4	Dr. Ashish Gupta	Faculty at CUHP
5	Dr. Dixit Sharma	DST Funded Young Scientist at CUHP
6	Dr. Ankita Sharma	RA-ICMR Funded Project at CUHP
7	Ms. Neha	Faculty at Government College Naura, Palampur
8	Dr. Gagandeep Singh	Post Doctorate Fellow at ICGB
9	Dr. Shailender k Verma	Assistant Professor DU, New Delhi
10	Dr. P Aparoy	Assistant Professor

52. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

S. No.	Name of the Programme	Name of external expert	Designation and Institute

53. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Practical Examinations, Seminars, quizzes and Tutorials

54. Highlight the Special facilities (if, any) of the Department.

Department having High Performance Computational Facilities dedicated for Bioinformatics Research capacitated with 28 Personal Computers and 17 Workstations

55. Highlight the unique features of the department.

Department offers the courses that having global demands and provides skill development of the students

56. State the Innovative practices adopted in the department. YES

57. Highlight the participation of students and faculty in extension activities. NA

58. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

a. Strengths:

1. Faculty with vast experience
2. Hardworking and sincere students
3. Curriculum
4. Computational skills
5. Good blend of theory and practicals

b. Weaknesses:

1. Faculty numbers
2. Lack of HPCF
3. Attracting students from diverse science backgrounds
4. Lack of adequate computing facilities
5. Old computational infrastructure

c. Opportunities:

1. To make a niche in the emerging research areas of CBB, like, systems biology, CADD, Machine learning, AI
2. To have good collaboration with other disciplines
3. Take a lead in Systems biology research
4. To develop good computational labs
5. To develop this centre as a key laboratory for the analysis of NGS data

d. Challenges:

1. Attracting good students
2. Developing computing facilities
3. Developing infrastructure
4. Attracting funding and resources
5. Securing placements for our students

59. Future plans of the department:

a. Long term plans-

To develop the state of the art facilities in the research areas of Computational Biology and Bioinformatics at this Centre

b. Midterm plans

To implement NEP 2020 in its letter and spirit

c. Short term plans

To cater for the needs of the MSc and PhD programs of the centre with the limited resources.

Declaration by the Head of the Department/In-charge

The information given in this report is verified and true to the best of my knowledge and I am aware that the above information provided by the department will be validated by the AAA committee during the visit.

Date:

Head of the Department/In-charge

Supplement to the Academic audit

1. Does the department prepare/maintain academic calendar? Enclose the copy. **YES**
2. Is Faculty-wise Academic Plan maintained at department level? **YES**
3. Is Departmental Meeting verified, Minutes recorded and maintained? **YES**
4. Are Classes being held regularly; as per designated time-slot; and full period is utilized as per the timetable **YES**
5. Department ensure that long gaps are not given in Students Timetable **YES**
6. Proper justice is done to the whole syllabus; Course completion report is kept **YES**
7. Does the department conduct Field Visit/Excursion trips? Please provide the detailed report. **NO**
8. Does the department have developed any mechanism of Student Mentoring? If yes Please provide the list of mentor and mentee and relevant point if any to be mentioned here. **Yes**

9. Departmental Activities Report is maintained; Duties are assigned properly **NA**

10. Departmental activities are distributed equally in both semesters **YES**

11. What is the process of Evaluation of Students' performance?

MID-Term Examination, Presentations, Class Room Seminars

12. Does any record of Non-performing Students is maintained? Yes, The performance of all students is reasonably satisfactory given the difficult circumstances of COVID19.

S. No.	Name and roll no. of the student	Course	Paper

13. Whether Attendance is recorded/ done? **YES**

Name of faculty	Attendance done online (Y/N)
Dr. Mahesh Kulharia	N
Dr. Vikram Singh	N
Dr. Shailender Kumar Verma	N
Dr. Gagan Deep Singh	N
Mr. Satpal Singh	N
Dr. Rishi Thakur	N

14. Does department maintain record of short of Attendance? **YES**

15. Does department have Mini Library and is properly maintained? **NO**

16. Are Record of circulation of books/material/syllabus, Guidelines etc. preserved? **NO**

17. Stock register/Issue Register and other record maintained in Department? **YES**

18. Does Departmental prepare any study material/data that which can be submitted to the Institutional Repository? If yes, please give the details. Computational Tools are developed in the department for the Computational Biology

19. Brief introduction of department (history, relevance, research highlights, career opportunities etc.) is updated on college website. **YES**

20. Student's achievements maintained at department? **NO**

21. Department prepare/release any Newsletter/Journals (If applicable) (provide soft copy) **NO**

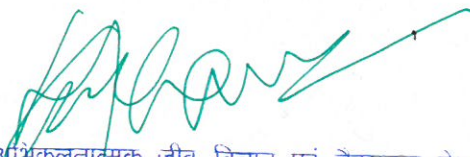
22. Contribution of the department to Corporate Life of the College (Only Convener/Coordinator/Adviser). **NO**

23. Participation of department in Institutional Social responsibilities. **YES**

24. Does department have any Industrial/Research institution Collaboration/Linkage. **NO**

25. Visibility Check

Visibility Check		Yes/No/ Not Applicable	Faculty member Responsible
A	Wall Magazine	Yes	Dr. Vikram Singh
B	Department Display Board	Yes	Dr. Mahesh Kulharia
C	College Website	Yes	Mr. Girish Sharma
D	e-Resources	Yes	Mr. Girish Sharma


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