



UGC HUMAN RESOURCE DEVELOPMENT CENTRE
UNIVERSITY OF MUMBAI

Shankarrao Chavan Teachers Training Academy Building,
Vidyanagari, Santacruz (E),

Mumbai – 400 098, Maharashtra, INDIA.

Tel. Nos. : (O) : 91- 7715092794

✦ email : ugchrhc@mu.ac.in



Rated as a Performer by NAAC, All India Rank VII

No. : HRDC / 27-254 / 20 21

January 7, 2021

Principal
R. J. College of Arts, Science & Commerce
Opp. Ghatkopar Railway Station
Ghatkopar (W),
Mumbai – 400 086

Dear Sir,

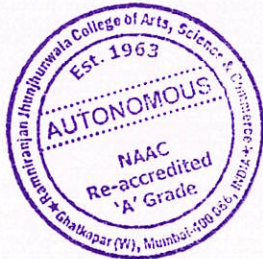
We thank R. J. College of Arts, Science & Commerce for conducting the online Short Term Course on "Research Methodology in Basic Sciences" from September 21 to September 26, 2020 under the aegis of UGC Human Resource Development Centre, University of Mumbai. We appreciate the efforts put in by the principal Dr. Himanshu Dawda and the course coordinator Dr. Kiran Kolwankar in organizing this programme.

Looking forward to your continued association in future.

With regards,

Yours sincerely,

(Dr. K. Shanthi)
Professor-Director




PRINCIPAL
RAMNIRANJAN JHUNJHUNWALA COLLEGE
OF ARTS, SCIENCE & COMMERCE (AUTONOMOUS)
Ghatkopar (W), Mumbai-400 086, Maharashtra, INDIA



R. J. COLLEGE of Arts, Science & Commerce (AUTONOMOUS)

(Hindi Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE of Arts, Science & Commerce)

Opposite Ghatkopar Railway Station, Ghatkopar (West), Mumbai 400086, Maharashtra, INDIA.

Website: www.rjcollege.edu.in Email: rjcollege@rjcollege.edu.in Tel No: +91 22 25151763 Fax No: +91 22 25150957

College is recognized under Section 2(f) & 12(B) of the UGC Act, 1956

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UGC HUMAN RESOURCE DEVELOPMENT CENTRE, UNIVERSITY OF MUMBAI

Online Short term Course on " Research Methodology in Basic Sciences"

(For Teachers from all science disciplines)

September 21st, 2020 to September, 26th, 2020

Coordinated by HVPS's Ramniranjan Jhunjhunwala College, Ghatkopar (W)

Day/ Date	Monday 21/09/2020	Tuesday 22/09/2020	Wednesday 23/09/2020	Thursday 24/09/2020	Friday 25/09/2020	Saturday 26/09/2020
Session 1 10.00 a.m. to 11.30 a.m.	Inaugural session and keynote address <i>Research Mindset: The Quest for Truth</i> Dr Madan Mohan Chaturvedi Prof of Zoology Delhi University	Science Innovation and Research Dr Prabhodh Chobe Ex Research Scientist Bayer India Ltd	<i>Research Methodology (Qualitative)</i> Dr. Shweta Naik, HBCSE	<i>Research Methodology (Quantitative)</i> Dr. Aniket Sule, HBCSE	<i>A network perspective on biologically-relevant chemical spaces</i> Dr. Areejit Samal, IMSc Chennai	<i>Health Research</i> Dr. Kumaraswami Sivan Ex. General Manager, IRIS Healthcare Pvt Ltd.
Session 2 11.40 a.m. to 1.10 p.m.	<i>How to write a research proposal</i> Dr Usha Mukundan Ex-Principal, RJ College		<i>Research Methodology (Planning and design)</i> Dr. Aniket Sule and Dr. Shweta Naik, HBCSE	<i>IPR and Patents</i> Mrs Pallavi Kharkar IPRAM Mumbai	<i>Project Presentation of Biological Sciences</i> Dr. Kale (expert) ex-RJC	<i>Plagiarism - what is it and how to avoid</i> Dr. Medha Joshi, Ex-Head, Dept of Lib. Tata Hospital
Session 3 2.00 p.m. to 3.30 p.m.	Online resources Mr Santosh Hulagabali Librarian Central University of Haryana	Types of Research Prof Krishna Iyer Bombay College of Pharmacy	<i>Scientific writing</i> Dr. Arpita Gupte	<i>Physics Synchronization - a case for interdisciplinary research</i> Prof. Punit Parmanand, IITB	<i>Project Presentation of Chemical Sciences</i> Dr. Mokal (expert), RJC	Review
Session 4 3.40 p.m. to 5.00 p.m.		Steps in Research Prof Krishna Iyer Bombay College of Pharmacy	Participants' Project Proposal discussion, finalization and submission Kiran Kolwankar	Participants' Project Proposal presentation preparation and discussion Kiran Kolwankar	<i>Project Presentation of Physical Sciences</i> Prof. Bhattacharya (expert) Ex- UDP, MU	Valedictory Chief Guest Prof. Bhanage, ICT Mumbai (starting at 3.00 pm)

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2008: Best College by University of Mumbai 2010: IMC RBNQ Award 'Performance Excellence' for the year 2009

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Report on the UGC HRDC's short term course on Research Methodology in Basic Sciences held during 21 to 26 September 2020

The course commenced on 21st September 2020 at 10.00 AM. Prof. Madan Mohan Chaturvedi from Delhi University was a keynote speaker. He gave a talk titled "Research Mindset – a quest for Truth" in which he exposed the audience to the importance of systematic approach to Research. The second session in the morning was by Dr. Usha Mukundan, Ex-Principal, R. J. College, on "How to write research proposals". This introduction was necessary as the participants were expected to write and submit a research proposal during the course.

The first step in writing a research proposal consists of literature survey and for this reason one needs to search and read the reference material. Therefore, the afternoon session was completely devoted to "Online Resources". Dr. Santosh Hulagabali, Librarian from the Central University of Haryana, gave a very extensive account of different ways of searching information on the internet.

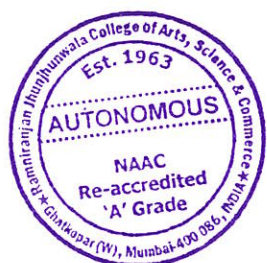
The second day, 22nd September 2020, was devoted to sensitizing the participants to what one means by research, what are different types of research and motivating them to carry out innovative research. The morning session was conducted by Dr. Prabodh Chobe, Ex Research Scientist, Bayer India Ltd, on "Science Innovation and Research". The afternoon session was engaged by Prof. Krishan Iyer, Bombay College of Pharmacy. He gave two talks titled "Types of Research" and "Steps in Research".

The third day, 23rd September 2020, started with the core subject of the course, that is, Research Methodology. Dr. Shweta Naik from HBCSE introduced the participants to the qualitative aspects of the research methodology in the first lecture of the morning session. In the second lecture, Dr. Aniket Sule from HBCSE continued the subject with insights into the aspects of planning and designing the experiments.

The scientific writing skills are also necessary to communicate the research at the planning as well as disseminating stage. The first lecture in the afternoon session was devoted to this. Dr. Arpita Gupte from D Y Patil Deemed to be University gave a very lucid and informative lecture on "Scientific Writing". The second session in the afternoon was a mentoring session, conducted by Dr. Kiran Kolwankar, for the participants to answer their specific questions about the research proposals. It was meant to solve their lingering doubts before they submitted their proposals. Dr. Usha Mukundan also joined to answer participants' questions which arose from her presentation on the first day.

The fourth day, 24th September 2020, started with the third lecture on Scientific Methodology which was engaged by Dr. Aniket Sule. He covered the quantitative aspects related to statistical tools and various ways to present the data. The second lecture of the morning session dealt with IPR and patents. Mrs. Pallavi Kharkar of IPRAM gave an elaborate exposure to different steps needed in protecting intellectual property rights.

Prof. Punit Parmanand from IITB's Physics Department gave a talk during the first session in the afternoon. He made a case for interdisciplinary research by taking example of a phenomenon of synchronization and using experiments carried out in his laboratory in the fields of Physical, Chemical and Biological Sciences. The second part of the afternoon session was again devoted to




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mentoring and solving difficulties of the participants regarding their presentations of the research proposals which were scheduled on the next day. It was conducted by Dr. Kiran Kolwankar

The first lecture on Friday, 25th September 2020, was by Dr. Areejit Samal of Institute of Mathematical Sciences, Chennai. He presented his work on network based analysis of chemicals present in medicinal plants found in India and China. He arrived at an interesting conclusion that though quite a few chemicals similar to these already exist in western medicine, a majority of them have not yet been exploited yet. Purpose of this talk was to present an example to the participants of a frontier research.

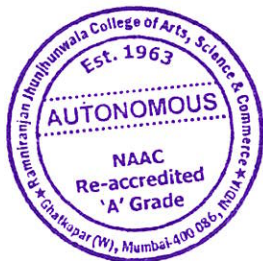
The second part of the morning session and the whole of the afternoon session was devoted to the presentation of research proposals by participants. They were divided into three groups. The proposals in the Biology were judged by Prof. Kale, an ex-RJC faculty and gave useful feedback to the participants. Dr. Mokal from the Chemistry Department of RJC evaluated the proposals in Chemistry. Finally, Prof. Bhattacharya, ex-faculty in the Physics Department of Mumbai University examined the proposals in the Physical Sciences.

The last day, 26th September 2020, began with a lecture by Dr. Sivan Kumaraswamy, Ex General Manager, IRIS Healthcare Pvt Ltd on "Health Research". He discussed several aspects of the subject including how to form the proposals and also the latest issues with Covid research. The second lecture of the morning session was on the important issue of Plagiarism. Dr. Medha Joshi, ex-Head, Department of Library, Tata Hospital started with ethics in research. Then she went on to explain what constitutes plagiarism, how to avoid it and how to check it.

The afternoon session started with a review. The participants were asked to give their feedback. All the participants found the course useful and many of them felt more confident of writing a research proposal after attending the course. There were a couple of suggestions, one to include a hands on session for plagiarism checking and another one to discuss how to design a questionnaire for research.

The course ended with a valedictory function with Prof. Bhanage from ICT, Mumbai as a Chief Guest. He delivered a lecture on "Green methods for synthesis of nanomaterials and their catalytic applications".

In all, 27 participants had paid the fees. However, two of them could not join the course owing to personal problems and changed academic responsibilities. Furthermore, two more participants had to discontinue the course owing to some unavoidable reasons. As a result, 23 participants completed the course successfully.



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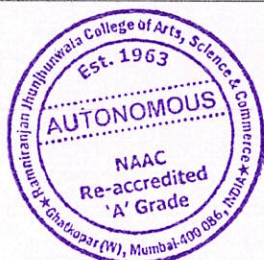
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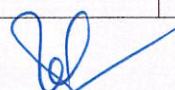
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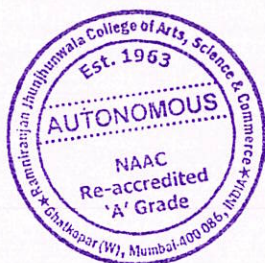
List of Resource Persons for UGC HRDC's short term course on Research Methodology in Basic Sciences held during 21 to 26 September 2020

Sr. No	Particulars	Topic taken	Contact details	Specialization
1	Prof. Madan Mohan Chaturvedi Professor, Laboratory for Chromatin Biology Department of Zoology University of Delhi Delhi - 110 007, INDIA	Research Mindset – a quest for Truth Keynote Speaker	Email:madan.chaturvedi@gmail.com; mchaturvedi@zoology. du.ac.in Tel (lab.): +91-11-27666051 (office-Zoology): +91-11-27667985 Ext. 203 (Fax): +91-1127666051	Zoology
2	Dr. Usha Mukundan Director Academics, Hindi Vidya Prachar Samiti, R. J. College, Ghatkopar(W), Mumbai 400 086	How to write Research Proposal	Cell: 9869003389 umukundan@hotmail.com	Botany
3.	Dr. Santosh Hulagabali University Librarian Central University of Haryana Jant-Pali, Mahendergarh-123 031 Haryana, India	Online Resources	Cell: +91-99874 28147 santosh@cuh.ac.in	Library Sciences
4.	Dr. Prabodh Chobe Ex Senior General Manager and Head of R & D Center, BASF	Science Innovation and Research	prabodh.chobe@gmail.com Cell: 9820310191	Chemistry
5.	Prof. Krishna Iyer Professor, Bombay College of Pharmacy, Kalina, Mumbai	Types of Research and Steps in Research	krishnaiye@gmail.com 98192 22354	Pharmacy
6.	Dr. Shweta Naik Scientific Officer, Homi Bhabha Centre for Science Education, TIFR, V. N. Purav Marg, Mankhurd, Mumbai 400088	Research Methodology (Qualitative)	Contact : 022-2507 2106 ,shweta@hbcse.tifr.res.in Cell: 97571 80111	Mathematics (Education)
7.	Dr. Aniket Sule, Reader Homi Bhabha Centre for Science Education, TIFR, V. N. Purav Marg, Mankhurd, Mumbai 400088	Research Methodology (Quantitative)	anikets@hbcse.tifr.res.in Cell: 98202 73239	Physics




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8.	Dr. Arpita Gupte Assistant Professor, Section Head and Course Coordinator Food Science and Technology Section School of Biotechnology and Bioinformatics, D Y Patil Deemed to be University, Navi Mumbai	Scientific Writing	Cell: 98214 55060 Email: arpita.gupte@dyatil.e du	Biotechnolog y
9.	Mrs. Pallavi Kharkar Founder, Consultant and Patent Attorney IPRAM Intellectual Property Services	IPR and Patents	pallavi@ipram.net T:+91 (0) 9619720232	Pharmaceutic al Chemistry and Law
10.	Prof. Punit Parmanand Institute Chair Professor Department of Physics Indian Institute Technology Bombay Powai, Mumbai	Synchronization – a case for interdisciplinary research	punit@phy.iitb.ac.in cell: 99304 27595	Physics
11.	Dr. Areejit Samal Reader F Computational Biology Group, The Institute of Mathematical Sciences (IMSc), Chennai, India	A network perspective on biologically- relevant chemical spaces	asamal@imsc.res.in cell: 94980 20090	Physics/ Computational Biology
12.	Dr. Sivan Kumaraswamy Ex- General Manager, IRIS Healthcare Technologies Pvt. Ltd.	Health Research	sivan_k11@rediffmail. com Cell: 98921 52480	Microbiology and Biotechnolog y
13.	Dr. Medha Joshi Consultant (Information Services) National Cancer Grid, Room no 1001, 10th Floor, Homi Bhabha Block, Tata Memorial Centre, Mumbai Former Head, Dept of Lib Scs Tata Memorial Hospital , Mumbai	Plagiarism	M – 9869271115 joshi.mva@gmail.com	Library Science
14.	Prof. Bhalachandra Bhanage Professor, Department of Chemistry, Institute of Chemical Technology, Matunga, Mumbai	Green methods for synthesis of nanomaterials and their catalytic applications	bm.bhanage@ictmumb ai.edu.in Cell: 93239 94018	Chemistry

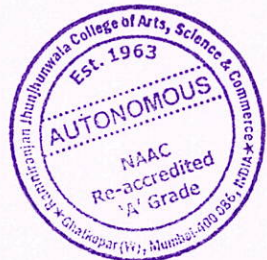



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attendance_consolidated

Attendance record for the MU HRDC STC on RMBS held from 21 Sept to 26 Sept 2020

Name	21 Sept		22 sept		23 Sept		24 Sept		25 Sept		26 Sept	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
AB Kanawade	98.48%	97.63%	96.94%	99.17%	100.00%	99.41%	99.14%	99.39%	100.00%	95.16%	100.00%	100.00%
Abhinav Kumar	100.00%	100.00%	100.00%	100.00%	97.61%	100.00%	98.71%	100.00%	100.00%	100.00%	100.00%	100.00%
Anil Deshmukh	100.00%	99.05%	96.94%	95.00%	93.78%	91.76%	87.12%	98.79%	97.79%	93.01%	96.45%	97.28%
Anup Pansare	99.49%	98.58%	100.00%	97.50%	99.52%	98.24%	100.00%	100.00%	99.12%	99.46%	100.00%	92.52%
Deepak Poojary	100.00%	100.00%	100.00%	100.00%	98.56%	100.00%	100.00%	100.00%	100.00%	98.39%	100.00%	100.00%
Digambar Sapkal	100.00%	98.10%	100.00%	100.00%	100.00%	97.06%	100.00%	100.00%	100.00%	98.92%	100.00%	93.88%
dilip rathore	100.00%	99.05%	100.00%	100.00%	97.13%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	91.84%
Dr. Ashok Kumar Singh	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.92%	100.00%	99.32%
dr.ashoka ch	70.20%	96.21%	89.08%	99.17%	100.00%	94.12%	100.00%	100.00%	93.81%	96.24%	99.49%	100.00%
DR.M.Kamaraj	94.95%	99.05%	100.00%	97.50%	94.26%	100.00%	65.24%	100.00%	94.69%	97.31%	100.00%	100.00%
Hem Lata Khurana	100.00%	100.00%	94.76%	100.00%	100.00%	100.00%	100.00%	97.58%	93.81%	95.16%	100.00%	97.28%
JYOTHI TP	99.49%	100.00%	100.00%	100.00%	100.00%	97.65%	100.00%	100.00%	99.12%	100.00%	100.00%	96.60%
kartiki bhawe	100.00%	98.58%	100.00%	94.17%	100.00%	97.06%	100.00%	100.00%	100.00%	97.31%	94.92%	95.92%
Mahendra S SHINDE	99.49%	95.73%	91.70%	65.83%	97.61%	84.12%	94.42%	100.00%	95.58%	93.01%	91.88%	93.20%
Nilesh Raut	100.00%	98.10%	100.00%	86.67%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.49%	100.00%
Padam Chand Bhati	100.00%	100.00%	100.00%	100.00%	99.52%	100.00%	100.00%	100.00%	98.23%	99.46%	100.00%	100.00%
pratyush purkayastha	100.00%	97.63%	100.00%	93.33%	79.43%	90.00%	96.57%	72.12%	100.00%	84.41%	96.45%	71.43%
Rajendra Mane	100.00%	94.31%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	96.77%	100.00%	94.56%
Ritesh Hatkar	100.00%	77.25%	69.00%	80.00%	100.00%	47.06%	77.68%	12.12%	100.00%	15.05%	0.00%	0.00%
Sachin Bedre	95.96%	100.00%	100.00%	100.00%	99.52%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Sindhu R L	100.00%	100.00%	100.00%	98.33%	100.00%	100.00%	100.00%	98.18%	99.56%	100.00%	100.00%	99.32%
SINI CHANDRAN	100.00%	96.21%	98.69%	97.50%	100.00%	100.00%	99.14%	98.79%	96.46%	100.00%	100.00%	98.64%
USHA SARASWATHI.U	100.00%	100.00%	100.00%	99.17%	100.00%	100.00%	100.00%	98.18%	100.00%	100.00%	100.00%	100.00%
Vijaya Rode	100.00%	98.58%	100.00%	100.00%	99.52%	100.00%	100.00%	98.79%	100.00%	100.00%	100.00%	97.96%
Dr SACHIN SAKATE	81.31%	88.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



**UNIVERSITY GRANTS COMMISSION
HUMAN RESOURCE DEVELOPMENT CENTRE**

University of Mumbai



UGC SPONSORED ONLINE SHORT TERM COURSE

This is to certify that

Deepak Annappa Poojary

from

Ramniranjan Jhunjhunwala College, Ghatkopar, Mumbai

participated in the short term course in

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conducted from September 21 to September 26, 2020

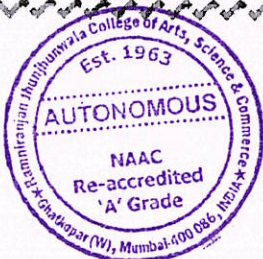
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Co-ordinator

Sept. 26, 2020 MUMBAI

[Signature]
Director

[Signature]
Vice-Chancellor



[Signature]
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