

Department of Mathematics

1. Name of the Department: Department of Mathematics
2. Year of Establishment: 2001 UG and 2014 PG
3. Names of Programmes / Courses offered: UG (B.Sc.) and PG (M.Sc.)
4. Names of Interdisciplinary courses and the departments/units involved: Nil
5. Annual/ semester/choice based credit system (programme wise): PG –Semester system and U.G. (B.Sc. I and II) choice based credit system, B.Sc. III (Annual)
6. Participation of the department in the courses offered by other departments: Nil
7. Courses in collaboration with other universities, industries, foreign institutions, etc. : Nil
8. Details of courses/programmes discontinued (if any) with reasons : NA
9. Number of Teaching Posts: 03 sanctioned (filled 02)
10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.): 1 post is vacant

Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D. Students guided for the last 4 years
Anita mar	M.Phil., Ph.D.	Associate Professor	Fixed Point Theory, Functional Analysis	UG -18 years PG -07 years	Guiding 2 students
ishan l.	Ph.D.	Assistant Professor	Complex Analysis	11 years	Nil

11. List of senior visiting faculty: NA

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: NA

13. Student -Teacher Ratio (programme wise): U.G .60:2 and P.G. 27:2

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled :NA

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ M.Phil./PG. M. Phil.:
Dr. Anita Tomar-- M. Phil., Ph.D. Dr Roshan Lal-Ph.D.

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received: Nil

18. Research Centre /facility recognized by the University: Yes

19. Publications: **39**

a) Publication per faculty: Dr. Anita Tomar =22. Dr. Roshan Lal =17

Number of papers published in peer reviewed journals (national / international) by faculty and students: Faculty-Dr. Anita Tomar: 22, Dr. Roshan Lal =16

Research Scholars –accepted 02,communicated -05

- Number of publications listed in International Database (For e.g.: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Zentrablatt(ZbMath), Mathscinet Mathematical Reviews -08(Dr. Anita Tomar)
- Google Scholar-22 (Dr. Anita Tomar)
- Citation Index - 98 (Dr. Anita Tomar)
- h-index -05(Dr. Anita Tomar)
- Chapter in Books-

02 (Dr. Roshan Lal):

1. Some interesting results on roots of polynomial and analytic function, Chapter in book “Modern approach to Mathematics” Yking Books, ISBN: 978-93- 82532- 99-6, 2015.

2. Inequalities concerning polar derivative of polynomial, Chapter in Book “Applied Mathematics” Yking Books, ISBN: 978-93-82532-64-4, 2014.

02(Dr. Anita Tomar):

- Common Fixed Point Theorems with an Application, Chapter in Book “Recent Advances in Fixed Point Theory and Applications” NOVA SCIENCE PUBLISHERS, INC. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788-3619, USA
- Book-‘Theory of Equations’ (as per UGC Curriculum, Choice based credit system) ISBN: 978-93-86080-37-0(Dr. Anita Tomar)

01(Research Scholars)

20. Areas of consultancy and income generated : Nil

21. Faculty as members in

a) National committees: Life membership:

Dr. Anita Tomar:

- Indian Society for History of Mathematics
- Indian Mathematical Society

Dr. Roshan Lal

- Indian Mathematical Society
- Ramanujam Mathematical Society
- Bharat Ganita Parishad

b) International Committees: Nil

c) Editorial Boards: Dr. Anita Tomar

1. Editor-in-Chief, International Journal of Engineering, Contemporary

Mathematics and Sciences, Open Access Journal (ISSN No: 2250-3099),
Global Impact factor for 2015: 0.324.

2. Associate Editor, Journal of Statistics and Mathematics, ISSN: 0976-8807
(Print) E-ISSN: 0976-8815 (Online).
 3. International Editorial Board Member IISEM- International Institute of
Science Engineering & Management (2 year Digital Membership Certificate
with the Membership number of IISEM-International Editorial Board).
 4. Editorial board Member -Scientific Board of Computer, Electrical &
Electronic Engineers (IIE-International Institute of Engineers).
 5. Editorial board Member, International Journal of Fixed point Theory and
Algebra (IJFPTA).
22. Student projects

a) Percentage of students who have done in-house projects including inter
departmental/programme: 100% in 2014, 2015 and 2016

b) Percentage of students placed for projects in organizations outside the institution
i.e., in Research laboratories/Industry/ other agencies : Nil

23. Awards / Recognitions received by faculty and students :

1. Technical Sessions Chaired:

Dr Anita Tomar:

- Chaired a Technical Session at National conference on Advances in Mathematics
and its Applications (AMA -2013), National Institute of Technology, Hamirpur
(H.P.), June 25-27, 2013.
- Chaired a Technical Session at International Conference on Advances in Pure and
Applied Mathematics (ICAPAM-2014), Jawaharlal Nehru Government College
Haripur (Manali) H.P., March 7-9, 2014.
- Chaired a Technical Session at National Seminar on Advances in Applied
Mathematics and Mechanics (NSAAMM -2015), Sidharth Government College
Nadaun, Hamirpur (H.P.), Mar. 12-13, 2015.

Dr. Roshan Lal

- Chaired a Technical Session at National Conference on “Role of Mathematics in Sustainable Development”, Govt. Degree College Karanprayag (Chamoli), 17-18th October 2014.

2.Honours:

- Received certificate of Merit in National conference on Recent Trends in Physics, Mathematics and Engineering, Sharda Vilas College Mysore, Feb. 20-21, 2015.
- Received certificate of Appreciation in International Conference on Advances in Science, Engineering & Technology, International Journal of Advance Research and Innovation and MANU-International Council for Man and Nature, Jan. 29-30, 2016.
- Selected as member of delegate from Uttarakhand to participate in ICM-2010.

3.Reviewer:

- Mathematical Reviews a division of American Mathematical Society, USA.
- Many SCI & SCIE Journals for instance Iranian Journal of Fuzzy Systems (IJFS), J. Advanced Research in Pure Math. Online ISSN: 1943-2380, Iranian J Math, Filomat ISSN 0354-5180 (Print), ISSN 2406-0933, Journal of Advanced Mathematical Studies, TWMS J. App. & Eng. Math (Online) and so on indexed in Mathematical Reviews, Zentralblatt/ZbMATH and Web of Science.

4.Workshops/Seminars/Conferences attended: Abroad:

1. Geometrique structures and controle theory, Attended CIMPA Research School, Université Cheikh Anta Diop de Dakar (UCAD) **Dakar, Sénégal** (Africa) May 7-18, 2012.
2. On existence and uniqueness of common fixed point and continuity of maps, A **talk** given in ICM Satellite Conference 2014: The Fourth Asian Conference on Nonlinear Analysis and Optimization, National Taiwan Normal University **Taipei, Taiwan**, August 5 - 9, 2014.
3. Application of faint compatibility to Ćirić type and Hardy-Rogers type F-contractions, A **talk** given in The 11th International Conference on Fixed

Point Theory and its Applications Galatasaray University, **Istanbul, Turkey**, July 20 – 24, 2015.

4. On existence of coincidence and common fixed point of faintly compatible pair of maps, A paper presented in The 9th Asian Conference on Fixed Point Theory and Optimization 2016 (ACFPTO -2016), King Mongkut's University of Technology (KMUTT) **Bangkok, Thailand**, May 18 – 20, 2016.
5. On continuity of maps and existence of common fixed point, A **talk** given in International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS- 2016), Tribhuvan University and Kathmandu University, **Kathmandu, Nepal**, May 26 – 29, 2016.

5.Financial Assistance:

- Received full financial support to participate in ICWM-2010 and ICM-2010.
- Received full financial support (Travel, Registration, Boarding and Lodging), International Centre for Pure and Applied Mathematics (CIMPA) to attend CIMPA Research School, Geometrique structures and controle theory, Université Cheikh Anta Diop de Dakar (UCAD) Dakar, Sénégal(Africa).

Other Recognitions:

- Judge, Zonal level Inter School (Mathematics) exhibitions, Central School for Tibetans, Herbertpur (Under ministry of HRD, Government of India), 15th Nov.2014.
- Member of selection and screening committee for the selection of faculty for morning and evening classes in Government Degree/ P.G. colleges of Dehradun District.
- Member panel inspection constituted by Sri Dev Suman Uttarakhand Vishwavidyalaya for starting evening classes in Government P.G. college Kotdwara (Pauri Garhwal) and M.K.P.P.G. College Dehradun.
- Delivered 12 Lectures under Edusat programme of Department of Higher Education Uttarakhand for U.G. Students in 2012-13.
- Member of the selection and screening committee of B.Ed. faculty in the Government Degree colleges of Uttarakhand.
- Coordinator Environmental Science 2006,2015, 2016,2017.
- Coordinator P.G. Diploma in Yogic Science 2009-10, 2010-11.
- Coordinator BBA 2009-10,2010-11, 2013-14 and 2014-15.

- Coordinator Uttarakhand Open University, Haldwani 2015.
- Nominated as **subject expert** and prepared Technology Enhanced Learning Syllabus (TEL Syllabus) of Mathematics under Uttarakhand Technology Enhanced Learning (UKTEL) Technology programme to start e-learning in the state, RUSA.
- Nodal officer Technological Enabled e-Learning, 02.02.2017.

24. List of eminent academicians and scientists / visitors to the department: Prof. R. C. Dimri, H. N. B.G. (a Central) University, Srinagar Garhwal visited the department and delivered a talk on ‘**Mathematics and its relevance in Science**’ on 03.01.2017.

25. Seminars/ Conferences/Workshops organized & the source of funding

- a) National : Nil b) International : Nil

In College:

- Organized Entrepreneurship Awareness Camp under DST NIMAT PROJECT in 2010. **Funding Agency:** DST NIMAT PROJECT
- Organized self defense workshop for girls (07-02-2011 to 12-02-2011)
- Organized Yoga workshop for girls (14-02-2011 to 19-02-2011)
- Organized Pachhwadoon Yogasan championship (Feb. 24-25, 2011)
- Organized **self defense** workshop for girls from 21-02-2012 to 28-02-2012
- Organized **Yoga** workshop for girls from 24-02-2012 to 02-03-2012
- Workshop on adolescent reproductive and sexual health Under Arsh Udan programme on 25.03.12
- Organized **self defense** workshop for girls (28.08.13-03.09.13)
- Organized workshop on adolescent reproductive and sexual health under Arsh Udan Programme on 08.03.13
- Organized workshop on Policies **of Government for Women Protection** 9th March 2013.
- Organized **Yoga** workshop for girls from (18.02.13-23-02.13)
- Organized self defense workshop for girls 18.02.14-24.02.2014
- Organized Yoga workshop for girls (10.02.14-15.02.2014)
- Organized workshop on ‘**Let the Girls be Born**’ and “**Rajya mein Ghatte Langanupaat evam Ling Asamanta ka Mahilaon par Prabhav**” on 12.03

.2014 on International Women's Day in collaboration with Bhuwaneshwari Mahila Ashram to sensitize youth about a gender balance in society

- Member Organizing Committee, Awareness workshop on Standard Training Assessment and Reward Scheme (STAR) of NSDC implemented by National Stock Exchange (NSE) & Department of Higher Education Uttarakhand, Doon University Dehradun, March 20, 2014. Funding Agency: Govt. Degree College Dapathar.
- Organized self defense workshop for girls (02.02.15- 07.02.15)
- Organized workshop on adolescent reproductive and sexual health Under Arsh Udan programme on 08.03.15
- Organized seminar on Government and Banking Jobs in collaboration with Times Institute in college, 10.12.2014.
- Organized 1 week Yoga Camp for girls (09.02.15 -14.02.15)
- Organized 1 week self defense workshop for girls (08.02.16-13.02.16)
- Organized Workshop on adolescent reproductive and sexual health on 12.02.16
- Organized workshop under **Protection of Women from Domestic Violence Act 2015** to aware students of College Dakpathar and local ladies about the act to stop domestic Voilence, 24.02.2016
- Organized workshop on **Beti Bachao, Beti Padhao** and **Protection of Women from Domestic Violence**, to aware students of College by Nritya natika, on International Women Day, 08.03.2016.
- Celebrated National Science Day - Seminar on 'Indian Women Mathematicians' on 28.02.2017
- Organized 1 week Self Defense Workshop 02.03.17- 07.03.17
- Celebrated International Women's Day on 08.03.17

6- Student profile programme/course wise (2011-16)

Name of the Course/programme	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
B.Sc – I(2011-12)	150	95	40	55	71.7%
B.Sc.- II (2011-12)	55	55	20	35	100%
B.Sc. - III (2011-12)	38	38	17	21	97.8%
B.Sc – I(2012-13)	140	100	57	43	74.5%
B.Sc.- II (2012-13)	70	70	26	44	97%
B.Sc. - III (2012-13)	53	53	21	32	98.4%
B.Sc.- I (2013-14)	160	110	50	60	66.3%
B.Sc - II(2013-14)	65	65	36	29	92.3%
B.Sc.- III(2013-14)	69	69	23	46	92.6%
B.Sc. - I(2014-15)	166	60	30	30	90%
B.Sc. - II (2014-15)	55	55	26	29	93%

B.Sc. - III (2014-15)	61	61	32	29	98%
M.Sc – Ist Sem. (2014)	51	25	07	18	96%
M.Sc – IInd Sem. (2015)	24	24	06	18	95.8%
B.Sc. – Ist Sem. (2015)	322	60	24	36	85.6%
B.Sc. – IInd Sem. (2016)	64	64	25	39	79.6%
B.Sc. - II (2015-16)	32	32	14	18	84.4%
B.Sc. - III (2015-16)	51	51	24	27	98%
M.Sc – Ist Sem. (2015)	45	27	09	18	96.2%
I.Sc – IIIrd Sem. (2015)	24	24	06	18	100%
M.Sc – II Sem. (2016)	27	27	09	18	96.2%
I.Sc – IVth Sem. (2016)	24	24	06	18	95.8%

27. Diversity of Students

Name of the Course	% of students from the same state	% of students from other States	% of students from abroad
B.Sc. – I 2010-15	100%	NA	Nil
M.Sc.-I Sem. 2014-16	100%	NA	Nil
B.Sc. – I 2016-17	100%	NA	Nil
M.Sc.-I Sem. 2016-17	99.94%	.06% (J & K)	Nil

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.: Applied for NET and GATE

29. Student progression

Student progression	Against % Enrolled
UG to PG.	NA
Employed Campus selection Other than campus recruitment	NA
Entrepreneurship/ Self -employment	NA

30. Details of Infrastructural facilities

a) Library

b) Internet facilities for Staff & Students: Yes, Campus is Wi-Fi

c) Laboratories: Computer Lab with Internet facility for students and staff

31. Number of students receiving financial assistance from college, university, government or other agencies: scholarship is given to SC, ST, OBC and Meritorious Students.

32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts: UG students attend special lectures delivered by external experts through EDUSAT Programme. Students also participate actively in all the activities organized in college

33. Teaching methods adopted to improve student learning:

1. Used Reference books, Text books and Internet- NEPTEL (nptel.ac.in/), CEC (cec.nic.in/), E-learning through online Web etc. to teach students and helped

them in preparing notes so that students of Hindi medium background can cope up with studies.

2. Interactive Lectures (Participatory Learning modules- Group discussion to develop interest in the topic), Power point presentation by LCD and OHP. In addition student seminars are also conducted.
3. Used diagram and real life examples to explain wherever possible.
4. Helped in preparing Projects to M.Sc. students after the college time.
5. Students are encouraged to raise the questions in the class.
6. Solved student's problems after the class.
7. Assignment

34. Participation in Institutional Social Responsibility (ISR) and Extension activities: N.S.S. and N.C.C. students participate in annual camps where they inculcate good habits among the public. Many students donate blood for the needy.

- Participation in activities organized by Department.
- Celebrating and organizing department function.
- Involvement in rallies.
- Involvement in college activities.

35. SWOC analysis of the department and Future plans:

Strengths

- Brilliant Results
- Highly Qualified, Competent Faculty
- Participation of teachers in academic & research activities
- Computer Lab with Internet

Weaknesses

- Less staff
- Relatively lesser number of teachers in comparison to the number of students.
- No supporting staff (Lab assistant, Lab bearer)
- Inadequate funding.

Opportunities

- Organization of seminars /lectures
- Enriching the computer lab by purchasing latest software needed for research activities, printer.

Challenges

- Fill up the vacant post and creation of new posts to reduce the ratio of teachers to the students.
- Better placement of students.
- To improve the learners communicative skills in English .

Future Plans

- To organize lectures of eminent subject experts.
- To make efforts to organize a national and international seminar / conference.
- To submit research project to funding agencies.
- To increase the number of publications in Reputed journals with high impact factor.