



SHIROMANI GURDWARA PARBANDHAK COMMITTEE'S

# Guru Nanak Khalsa College

of Arts, Science & Commerce

Matunga, Mumbai – 400 019.



**Addendum**  
**NAAC Reaccreditation Report 2015**  
**(Third Cycle)**

## Index

<b>Sr.No.</b>	<b>Title</b>	<b>Page No.</b>
1.	Evaluative Report : Economics Department	1-6
2.	Evaluative Report : Punjabi Department	7- 9
3.	Evaluative Report : Bioinformatics Department	10-15
4.	Evaluative Report : Analytical Chemistry Department	16-20
5.	Evaluative Report : Physics Department	21-26
6.	UGC XII <sup>th</sup> Plan Sanction	27-30
7.	Certificate of Compliance	--
8.	AISHE Certificate for 2014-15	--

### Evaluative Report: Economics Department

1. **Department:** Economics
2. **Year of Establishment:** 1937
3. **Courses offered:** UG level
4. **Interdisciplinary course:** Nil
5. **Choice based credit system:** Semester Based CBSGS
6. **Participation in courses offered by other department:** FYBSc. (Economics), B.Com., M.Com., Foundation Course (UG)
7. **Courses in collaboration:** Nil
8. **Courses discontinued:** Nil
9. **Number of teaching posts:** Associate Professors : 02 ; Assistant Professors : 02
10. **Faculty Profile:** For Year 2014-2015

Name	Qualification	Designation	Specialization	Exp (Years)	Ph.D students guided
Dr. Mrs. Suchitra Kumar	Ph.D. (Economics)	Associate Professor, Head	Development Economics, Econometrics, Mathematical Economics	29 yrs	Nil
Mrs. Elizabeth Rosen	M. A., (NET)	Associate Professor	International Economics	22 yrs	
Mr. SwapnilSuryavanshi	M. A. , (NET)	Assistant Professor	International Economics	11 months	
Mr. Dattatray Yadav	M. A. , (SET)	Assistant Professor	Monetary Economics	10 months	
Mrs. KetakiTawade	M. A.	On Contract	-	-	

11. List of senior visiting faculty: Nil

12. Percentage of lectures delivered by temporary faculty: 20%

13. Student Teacher Ratio:

Class	Ratio	Class	Ratio
FYBA	87.5:1	FYBCom	247:1
SYBA	49:1	SYBCom	209:1
TYBA	5:1	TYBCom	183:1

14. Number of academic support staff: Nil

15. Qualification of teaching faculty: Ph.D.: 1, NET/SET: 3

16. Ongoing projects: National (UGC) – 1 (Rs. 1,00,000).

17. Projects funded and total grants received:

Faculty	Funding Agency	Period (Yrs)	Amount (Rs)
Dr. Mrs. Suchitra Kumar	University of Mumbai	1	11,500
Mrs. Meenakshi Narayanswamy	University of Mumbai	1	41,000

18. Research Centre: Nil

19. Publications: Papers: 09 Book: 01

Dr. Mrs. Suchitra Kumar

Book

- Women Education, Health and Mobility Status' Book Publishers New Century Publication in August 2014, ISBN 978-81-7708-384-2.

Papers Published

- 'From Parents to children: Inter-generational Transfer-A Case Study' *Journal of Global Economy*, Vol. 7 No. 3, July-Sept. 2011, pp: 202-215, ISSN 0975-3931
- 'Nutritional Deprivation: A Gender-based Analysis' *Journal of Global Economy*, Vol. 8, No. 1, March 2012, pp.: 53-62,ISSN 0975-3931

- 'Women's Mobility in India: Missing Labour Force', *Journal of Global Economy*, Vol. 10, No. 3, Sept. 2014, pp:205-220 ISSN 0975-3931

Mrs. Elizabeth Rosen

Papers

- 'Complementarities of trade between EU and India', *International Journal of Developments in Trade*, Vol. 1, Issue 12, Dec. 2014, ISSN: 2348-1633)
- 'India's Merchandise Trade- A Revealed Comparative Advantage Analysis', *International Research Journal of Commerce Business and Social Sciences*, Vol. 3, Issue No. 1, April 2014, ISSN: 2277-9310.
- 'Capital Flows in India: Trends and Issues', *Proceedings of the UGC Sponsored National Seminar held at Birla College*. ISBN: 978-93-5097-579-4
- 'India's Trade Policy: Analysis of the Past and Present', in Edited Book- *My Country India: Nostalgia and Anticipation*, Bharati Publication Delhi, 2013. ISBN 978-93-81212-26-4

Mrs. DevinderKaurPresented and Published 'Socio-Economic Aspects of Sikhism' in *AmritPurab- a Compendium of Papers at the National Seminar held at KhalsaCollege*. ISBN 978-81-910922-5-7

Mrs. VeenaSinghpresented and published a paper on Youth Migration: Brain Drain Vs Brain Gain at a two day national Seminar on Migration and Development: Opportunities and Challenges' Jointly Organized by Jhunjhunwala College and IIPS

**20. Consultancy Projects and Revenue generated:** Nil

**21. Faculty as members in committees:**

- National Committees: Dr. Suchitra Kumar is Life-Member in IAWS.
- International Committees: Dr. SuchitraKumarisMember of IAFFE.
- Editorial Boards: Dr. Suchitra S Kumar is member of Editorial Advisory Board & Review Committee of *Journal of Global Economy*.

**22. Student projects:** Nil

### 23. Award / Recognitions:

- Dr. Suchitra Kumar received “Best writer of The Year Award for 2009”, by the Journal of Global Economy for the Article *Control over Resources: A Gender Perspective* in their Journal presented in a National Seminar in SVIMS, Sept. 2011
- Dr. Suchitra Kumar was Guest of Honour at SVIMS, National Seminar, and 24th Sept. 2011.
- Dr. Suchitra Kumar was Guest of Honour at ArunaManharlal Shah Institute of Management and Research, National Seminar, 21<sup>st</sup> Sept. 2013.
- Mrs. MeenakshiNarayanaswamy and Mrs. Veena Singh were invited to be a part of OER project, a joint program of Wiki Educator & University of Mumbai to be uploaded in the University of Mumbai.
- Mrs. MeenakshiNarayanaswamy was invited as resource person at one day workshop on revised TYBA Economics syllabus of Computer Application of Economic Analysis at Pragati College.

### 24. List of eminent academicians and scientists / visitors to the department :

- Dr. Chandrahas Deshpande, Former Director of Research, Trade & Promotion, WTC(2012-2013).
- Dr. Nina Eduljee, Professor, Saint Joseph College, Maine, USA
- Mrs. Gunjeet Kaur, Director of Economic Policy & Research, RBI.
- Mr. D. Sundaram, Managing Director and Vice-Chairman, TVS Capital Funds Ltd., former Vice-Chairman & CFO of Hindustan Unilever Ltd.,
- Mr. Katoti Senior Economist, TATA Services Ltd.
- Mr. RaghavNarsaley, India Lead, Accenture Institute for High Performance.
- Dr. Arokiaswami, Professor, Department of Development Studies, International Institute for Population Sciences.

### 25. Seminar / Conferences / Workshops: Nil

**26. Student profile course wise:** For 2014-2015

Course/Program	Selected	Enrolled		Pass %
		M	F	
FYBA	175	60	115	Sem-I:19
				Sem-II:45
SYBA	98	26	72	Paper II Sem-III:58
				Paper II Sem-IV:60
				Paper III Sem- III: 63
				Paper III Sem-IV: 69
TYBA	21	08	13	Sem-V:28
				Sem-VI:-
FYBCOM	247	146	101	Sem-I:30
				Sem-II:48.9
SYBCOM	209	89	120	SemIII-30
				Sem IV-48.8
TYBCOM	135	38	97	SemV-96
				Sem VI-95.58

**27. Diversity of Students – Overall for all the courses:**

Same State (%)	Other State (%)	International (%)
100%	Nil	Nil

**28. Students cleared competitive examinations:** Nil

**29. Students Progression:**

Students Progression	Against % enrolled
UG to PG	10%
PG TO M.Phil	Nil
PG to Ph.D	Nil
Ph.D to Post-Doctoral	Nil
Employed	
• Campus selection	-
• Other than campus	-

Entrepreneurship / Self-employment	-
------------------------------------	---

**30. Details of infrastructural facilities:**

- a) Library :Main Library - 3656 Books; department library books available.
- b) Internet Facilities for staff and students : Available
- c) Classrooms with ICT Facility : Nil
- d) Laboratories : 1

**31. Financial assistance for students:** As per the college financial assistance scheme.

**32. Details on student enrichment programs with external experts:**

Guest Lectures, A. D. Shroff Memorial Elocution Competition, Debates, Intercollege Essay writing competition.

Sending students for competitions, seminars, workshops.

**33. Teaching methods adopted to improve student learning:** PIP, Remedial PIP, Test series, Assignments, Discussion, Presentations, Movies based on topics on Economics.

**34. Participation in institutional social responsibility and extension activities:** 2 LMC members, 2 Vice Principals, Members of IQAC Committee, Examination Committee, Prospectus Committee, Unfair Means Committee, Scholarship Committee.

**35. SWOC analysis and future plans:**

Strength	Weakness	Opportunities	Challenges	Future Plan
Library facility created for students	Post graduate course is required to be started	Organize National, International Seminars/ Conferences	Make the dept. a full-fledged one offering students maximum opportunities to learn economics	<ul style="list-style-type: none"> <li>• Organize National, International Seminars/ Conferences</li> <li>• To start Add-on &amp; PG Courses</li> </ul>



### Evaluative Report: Punjabi Department

1. **Department:** Punjabi
2. **Year of Establishment:** 1937
3. **Courses offered:** UG level
4. **Interdisciplinary course:** Nil
5. **Choice based credit system:** Semester Based CBSGS
6. **Participation in courses offered by other department:** Nil
7. **Courses in collaboration:** Nil
8. **Courses discontinued:** Nil
9. **Number of teaching posts:** 1 visiting faculty
10. **Faculty Profile:** For Year 2014-2015

Name	Qualification	Designation	Specialization	Exp (Years)	Ph.D students guided
Mrs. Bhupinder Kaur	M.A. M.Phil	Visiting Faculty	Punjabi	15 Years	Nil

11. **List of senior visiting faculty:** Nil
12. **Percentage of lectures delivered by temporary faculty:** Nil
13. **Student Teacher Ratio:** 5:1
14. **Number of academic support staff:** Nil
15. **Qualification of teaching faculty:** M.Phil: 1
16. **Ongoing projects:** Nil
17. **Projects funded and total grants received:** Nil
18. **Research Centre:** Nil
19. **Publications:** Nil
20. **Consultancy Projects and Revenue generated:** Nil
21. **Faculty as members in committees:** Nil

**22. Student projects:**In-house (100%)

**23. Award / Recognitions:** Nil

**24. List of eminent academicians and scientists / visitors to the department :**Nil

**25. Seminar / Conferences / Workshops:** Nil

**26. Student profile course wise:** For 2014-2015

Course/Program	Selected	Enrolled		Pass %
		M	F	
TYBA	1	0	1	Sem-V: 100%
				Sem-VI: To appear

**27. Diversity of Students – Overall for all the courses:**

Same State (%)	Other State (%)	International (%)
100%	Nil	Nil

**28. Students cleared competitive examinations:** Nil

**29. Students Progression:**

Students Progression	Against % enrolled
UG to PG	NA
PG TO M.Phil	NA
PG to Ph.D	NA
Ph.D to Post-Doctoral	NA
Employed <ul style="list-style-type: none"> <li>• Campus selection</li> <li>• Other than campus</li> </ul>	NA
Entrepreneurship / Self-employment	NA

**30. Details of infrastructural facilities:**

- e) Library : Main Library - 2683 books
- f) Internet Facilities for staff and students : Available
- g) Classrooms with ICT Facility : Nil

h) Laboratories : Nil

**31. Financial assistance for students:** Nil

**32. Details on student enrichment programs with external experts:** Nil

**33. Teaching methods adopted to improve student learning:** Test series

**34. Participation in institutional social responsibility and extension activities:** NA

**35. SWOT analysis and future plans:**

<b>Strength</b>	<b>Weakness</b>	<b>Opportunities</b>	<b>Challenges</b>	<b>Future Plan</b>
Being in a Sikh minority college the Punjabi department gets full support from the management	Few students opt for the language	To attract more students to learn their language	Dwindling number of students	To appoint a full-time faculty

\*\*\*

### Evaluative Report: Bioinformatics Department

1. **Department:** Bioinformatics
2. **Year of Establishment:** 2009-2010
3. **Courses offered:** PG level
4. **Interdisciplinary course:** Nil
5. **Choice based credit system:** Semester Based CBSGS
6. **Participation in courses offered by other department:** Nil
7. **Courses in collaboration:** Nil
8. **Courses discontinued:** Nil
9. **Number of teaching posts:** 04
10. **Faculty Profile:** For Year 2014-2015

Name	Qualification	Designation	Specialization	Exp (Years)	Ph.D students guided (2010-15)
Mrs. Parakh Sharma	M.Sc. ,pursuing Ph.D (2013 onwards)	Coordinator	M.Sc.( Systems Biology and Bioinformatics)	5	Nil
Ms. GauriShende	M.Sc.	Lecturer	M.Sc. Bioinformatics	2	
Ms. AparnaPatil	M.Sc.,B.ed	Lecturer	M.Sc. Bioinformatics	1	
Mr. PramodShinde	M.Sc.	Lecturer	M.Sc. Bioinformatics	1	

**11. List of senior visiting faculty:**

Dr.R.T. Sane	Dr. Jagdish Mehta
Ms. YogitaShinde	Dr. NaomitaDhume
Mr. Rakesh Barai	Mr. Ramakrishna Poojari
Mrs. V. V. Gokhale	Mr. Aditya Nakhare
Prof. Jasbir Kaur	Dr. Evans Coutinho
Mr. KamleshPangerkar	Mrs.RiyaVijan
Ms. Sabina Thareja	Mrs. PadmajaKamat
Dr. KanchanChitnis	Ms.RashmiNandwana
Dr. Deepak Modi	Mr. Aditya Nakhare
Dr. Rukmini Govekar	Mr.SandeepKuterkar
Mr. S. N. Prasad	Ms.Pinky Panda
Dr.AjitDatar	Dr.RahulSiddharthan
Dr.P. C. Tekale	Shin Devraj

**12. Percentage of lectures delivered by temporary faculty:**

- Inhouse workload(theory) =62%
- Visiting workload =38%  
Total lectures =100%
- Inhouse workload(practical) =85%
- Visiting workload =15%  
Total practical =100%

**13. Student Teacher Ratio:** 40:3

**14. Number of academic support staff:**

Technical Support Staff: 1; Non-Teaching Staff: 1

**15. Qualification of teaching faculty:** PG: 3

**16. Ongoing projects:** Nil

**17. Projects funded and total grants received:** Nil

18. Research Centre: Nil

19. Publications:

2011 - 2012

Name of Student /teacher Author/s	Title of the Paper	Journal Name	Journal Status
MandageRajendra, Dubey Kavita. MominAfaque	Proteome based discovery of <i>S. mansoni</i> novel aquaporins as therapeutic targets	Indo-Global Research Library.	International
RajendraMandage, Padmaja Kamath, MonaliWakle, AfaqueMomin,	Discovery of $\beta$ -lactam Antibiotic Resistance Specific Functional Residues: A Bioinformatics Approach	Electronic Journal of Biology.	International

2012 – 2013

PramodShinde, Vijay Savakare, KaustubhGirkar, VaishaliJadhav	Antibacterial screening of stem, fruit and leaves of <i>A. marmelos</i>	European Journal of Zoological Research	International
P Shinde, K Patil, G Shende, J Patel, A Patil et al.	Role and Challenges of Bioprogramming Languages in the Development of Bioinformatics Tools	Journal computational Intelligence in Bioinformatics,	International
PramodShinde, Vijay Savakare, KomalPatil, DevangiSarang	In- Silico drug docking of phyto Inhibitors against Triosephosphate isomerase in Plasmodium falciparum	International Journal of Advanced Bioinformatics and Computational Biology	International
MominAfaque, ChipkarYashodhan	Comparative Study of Various Ebola Virus Vp40 Strains with Modelling and Docking Studies to Treat Ebola Virus Infection	International Journal Of And Research Pharmaceutical Sciences	International

20. Consultancy Projects and Revenue generated: Nil

21. Faculty as members in committees: Nil

**22. Student**

**projects:**

<u>Year</u>	<u>In-House(A) %</u>	<u>Outside (B) %</u>
2010-11	29.41	70.58
2011-12	41.17	58.82
2012-13	21.05	78.94
2013-14	38.46	61.53
2014-15	41.66	58.33

**23. Award / Recognitions:**

2011-12	<ul style="list-style-type: none"> <li>Ms. DharaManek cleared NET examination 2012-13.</li> </ul>
2012-13	<ul style="list-style-type: none"> <li>Ms. Priyanka Shukla (BATCH 2013-14) won GOLD Medal and Avishkar Fellowship for Research in Medical and Pharmacy category. (Avishkar Maharashtra state level competition).</li> <li>Ms. AkshayaBobade has received Summer School grant from Mumbai University.</li> <li>4 Projects were selected for Mumbai University Summer School from department.</li> </ul>
2013-14	<ul style="list-style-type: none"> <li>Mr. PramodShinde (BATCH 2012-13) has joined as JRF in IIT INDORE.(2014-15)</li> <li>3 students participated in Summer School Internship conducted in May, 2014 by NFB, one student Ms.AkshayaBobadewon the 1<sup>st</sup> prize and is awarded with Rs.5000 for internship.</li> </ul>

**24. List of eminent academicians and scientists / visitors to the department :**

- Dr. R. T. Sane
- Prof.V.V.Gokhale
- Prof. Evans Coutinho
- Prof. Jasbir Kaur
- Mr. KamleshPingalkar
- Dr. AjitDatar

**25. Seminar / Conferences / Workshops: 02**

**26. Student profile course wise: For 2014-2015**

Course/Program	Selected	Enrolled		Pass %
		M	F	
M.Sc	14	6	8	> 90%

**27. Diversity of Students – Overall for all the courses:**

Same State (%)	Other State (%)	International (%)
100%	Nil	Nil

**28. Students cleared competitive examinations:**

Batch	Name
2010-11	Ms. DharaManek - Qualified For NET (2012-13) Ms. PallaviNakhwa - Qualified For PET
2011-12	Ms. GauriShende- Qualified for PET (2013-14)
2012-13	Mr. PramodShinde- Qualified for PET (2013-14)

**29. Students Progression:**

Students Progression	Against % enrolled
UG to PG	NA
PG TO M.Phil	NA
PG to Ph.D	10 %
Ph.D to Post-Doctoral	NA
Employed	
• Campus selection	NA
• Other than campus	70%
Entrepreneurship / Self-employment	NA

**30. Details of infrastructural facilities:**

- i) Library : Main Library - 56 Books
- j) Internet Facilities for staff and students : Available
- k) Classrooms with ICT Facility : Available
- l) Laboratories : 2

**31. Financial assistance for students:**

Year	No. of. Students
2012-13	<ul style="list-style-type: none"> <li>• Ms. SupriyaGaonkar –ScFreeship</li> <li>• Mr. Vijay Sahukare –NT</li> </ul>



2013-14	<ul style="list-style-type: none"> <li>• Ms. Nirupama Narayan – single girl child</li> <li>• Ms. Sapnalyer- single girl child</li> </ul>
---------	--

**32. Details on student enrichment programs with external experts:**

2010-2011	<ul style="list-style-type: none"> <li>• Workshop in Basic Techniques in Bioinformatics for 3 days.</li> <li>• SPSS Course Conducted In 2011 in collaboration with department of Maths.</li> <li>• One day workshop was conducted "HANDS ON TRAINING IN BIOINFORMATICS" for CKT college students on Dec-2011.</li> </ul>
2013-2014	<ul style="list-style-type: none"> <li>• NET Lecture Series (20 hours) for students and faculties was conducted from December, 2013-14.</li> <li>• Workshop on Basic Techniques in Bioinformatics on 27<sup>th</sup>-28<sup>th</sup> January 2014.</li> <li>• Seminar on how to clear BINC exam and HMM was conducted by department.</li> </ul>
2014-2015	<ul style="list-style-type: none"> <li>• NET Lecture Series (20 hours) for students and faculties was conducted from December, 2014-15.</li> <li>• Certificate Course in Biological Sequence Submission, Processing and Analysis was conducted by department from 9th – 14th June 2014.</li> </ul>

**33. Teaching methods adopted to improve learning:** Discussions, ICT, Seminars, class test.

**34. Participation in institutional social responsibility and extension activities:** NA

**35. SWOT analysis and future plans:**

Strength	Weakness	Opportunities	Threats	Future Plan
<ul style="list-style-type: none"> <li>• Ph.Dopportunities abroad and in India.</li> <li>• Ample scope for research.</li> </ul>	Lack of high level computational infrastructure.  Lack of awareness of this course.	To develop short term training courses.  To work in collaboration with other departments	Finding students for M.Sc. has become more difficult.	To receive research grants for various projects.  To work on extending extra divisions.

\*\*\*

## **Evaluative Report: Analytical Chemistry**

**Analytical Chemistry is one of the self-financing program under Chemistry Department. Evaluative Report for Analytical Chemistry is the same as that of Chemistry Department, which is reproduced**

- 1. Department:** Chemistry
- 2. Year of Establishment:** 1937
- 3. Courses offered:** UG, M.Sc. (Papers & Research), Ph.D.
- 4. Interdisciplinary course:** Nil
- 5. Choice based credit system:** UG and PG: Semester Based Credit and Grading System
- 6. Participation in courses offered by other department:**
  - M.Sc. Bioanalytical Sciences, M.Sc. Nutraceuticals, M.Sc. Bioinformatics, Five Year Integrated M.Sc. Bioanalytical Sciences.
  - GNIRD-Coordinator
  - Participation in University examination in above courses at various levels
- 7. Courses in collaboration:** Nil
- 8. Courses discontinued:** Nil
- 9. Number of teaching posts:** Associate Professors- 07; Assistant Professors- 10

**10. Faculty Profile: For Year 2014-2015: Coordinator: Dr. SudhirLingayat.**

<b>Name</b>	<b>Qualificatio n</b>	<b>Designation</b>	<b>Specialization</b>	<b>Exp (Years)</b>	<b>Ph.D students guided (2010-15)</b>
Dr. KiranMangaonkar Principal	M.Sc., Ph.D., P.G.D.M.E.	Associate Professor	Inorganic	31	14
Dr. R. K. Patheja	M.Sc., Ph.D.	Associate Professor	Inorganic	35	Nil
Dr. Chandra Maurya	M.Sc., Ph.D.	Associate Professor	Inorganic	25	04
Dr. B. S. AjitKumar	M.Sc., M.Phil. Ph.D.	Associate Professor	Physical	25	03
Dr. Meeta Rakesh	M.Sc., Ph.D.	Associate Professor	Physical	25	04
Dr. SudheerLingayat	M.Sc., Ph.D.	Assistant (Coo Professor	Inorganic	23	04
Dr. Ajitha Rani	M.Sc., M. Ed., Ph. D.	Assistant Professor	Organic	22	Nil
Dr. DeepaParab	M.Sc., Ph.D., SET	Associate Professor	Analytical	14	Nil
Dr. Harmeet Kaur Kohli	M.Sc., Ph.D., SET	Assistant Professor	Organic	13	Nil
Dr. Amul Desai	M.Sc., Ph.D.	Assistant Professor	Inorganic	10	02
Dr. PrafullachandraTekale	M.Sc., Ph.D.	Assistant Professor	Organic	10	02
Mr. Abhimanyu Yadav	M.Sc., NET-CSIR	Assistant Professor	Inorganic	06	Nil
Mr. RavindraDeore	M.Sc., M. Phil.	Associate Professor	Physical	31	Nil
Dr. Ranjeet Kaur	M.Sc., Ph.D.	Assistant Professor	Analytical	5	Nil
Dr. PritiKhedkar	M.Sc., Ph.D., NET-CSIR, Post Doc	Assistant Professor	Organic	5	Nil
Dr. Sukhjeet Kaur Gujral	M.Sc., Ph.D.	Assistant Professor	Organic	2	Nil
Dr. Tamanna Khan	M.Sc., Ph.D., Post Doc	Assistant Professor	Organic	5 m	Nil

**11. List of senior visiting faculty:** Nil

**12. Percentage of lectures delivered by temporary faculty:** 16%

**13. Student Teacher Ratio:** 50:1

**14. Number of academic support staff:**Sanctioned-20; Filled–20

**15. Qualification of teaching faculty:** Ph. D.-16, M.Phil.-1, PG- 1

**16. Ongoing projects:** National Funding: 4

**17. Projects funded and total grants received:**

Name of the faculty	Funding agency	Period (Yrs)	Amount Rs.
Dr.B.S.Ajit Kumar	DST	1	20,00,000
Dr.PritiKhedkar	DST	3	24,98,000
Dr. Meeta Rakesh	UGC	3	14,08,000
Dr. Chandra Maurya	UGC	3	11,08,800
DST-FIST Grant	DST	3	10,48000
DBT-STAR Grant	DBT	3	7,00,000
Total Grant			87,62,800

**18. Research Centre:** Ph.D.

**19. Publications:**

- Papers: 110-Refer RAR Appendix 3.4.3.a
- Books: Refer RAR Appendix 3.4.3.b

**20. Consultancy Projects and Revenue generated:** Nil

**21. Faculty as members in committees:**

- National Committees-03- Dr. K. Mangaonkar
- Editorial board of research journal-01- Dr. A. Desai

**22. Student projects:** Nil

**23. Award / Recognitions:** Nil

**24. List of eminent academicians and scientists / visitors to the department :**

Name	Institute
Dr. Sanjay Deshmukh	Head, Life Sciences, University of Mumbai-Kalina
Prof. S. S. Bhagwat	Head, Chemical Engineering, ICT
Prof. S. Kotha	Professor at IIT, Powai
Dr. PritiAmrutkar	DirectorEnvirocare, Thane
Dr. Vijay Dabholkar	Principal, Guru Nanak College, Mumbai

**25. Seminar / Conferences / Workshops: 07**

**26. Student profile course wise: For 2014-2015**

Course/Program	Selected	Enrolled		Pass %
		M	F	
F Y B. Sc.	361	206	155	41
S Y B. Sc.	226	77	149	82
T Y B. Sc.	71	27	44	31
M. Sc. II	18	10	8	62

\*MSc I & MSc II Analytical Chemistry Total number of students are 22.

**27. Diversity of Students – Overall for all the courses:**

Same State (%)	Other State (%)	International (%)
97	03	Nil

**28. Students cleared competitive examinations: Nil**

**29. Students Progression:**

Students Progression	Against % enrolled
UG to PG	50
PG TO M.Phil	Nil
PG to Ph.D	10 %
Ph.D to Post-Doctoral	NA
Employed <ul style="list-style-type: none"> <li>• Campus selection</li> <li>• Other than campus</li> </ul>	Nil 25%
Entrepreneurship / Self-employment	Nil

**30. Details of infrastructural facilities:**

- a) Library : Main library and 200 books available in departmental library
- b) Internet Facilities for staff and students : Available
- c) Classrooms with ICT Facility : Available
- d) Laboratories : 5

**31. Financial assistance for students:** 03 Ph. D. Students (02-UGC; 01-DST)

**32. Details on student enrichment programs with external experts:**

- Guest lectures
- Soft skills development workshops
- Chemistry day celebrations

**33. Teaching methods adopted to improve student learning:**

- Audio-visual aids
- Case studies and group discussions
- Use of molecular models

**34. Participation in institutional social responsibility and extension activities:**

- Faculty members are involved in extension activities, garden maintenance and energy audit
- Students and faculty members are involved in NSS, NCC and extension activities at various levels

**35. SWOT analysis and future plans:**

<b>Strength</b>	<b>Weakness</b>	<b>Opportunities</b>	<b>Challenges</b>	<b>Future Plan</b>
Strong research program and student centric strategy	Lack of add-on courses, inadequate infrastructure	To conduct cross-faculty courses, inter-disciplinary courses, add-on courses	To increase number of sponsored research projects and enhance the infrastructure	Guest lectures by industry experts and research projects for UG students

\*\*\*

## **Evaluative Report: Physics Department**

- 1. Department:** Physics
- 2. Year of Establishment:** 1964
- 3. Courses offered:** UG, PG (by papers), PG (by research), M.Phil, Ph.D.
- 4. Interdisciplinary course:** The entire Physics component in the Radiology Course DMRE for MBBS doctors under College of Physicians and Surgeons is conducted in the Department.(Refer No.7)
- 5. Choice based credit system:** UG and PG: Semester Based Credit and Grading System
- 6. Participation in courses offered by other department:** Physics component of Bio-analytical Science (F.Y.I.C)
- 7. Courses in collaboration:** Radiology Course DMRE for MBBS doctors under College of Physician and Surgeons, Parel, Mumbai.
- 8. Courses discontinued:** Nil
- 9. Number of teaching posts:** Associate Professors- 03; Assistant Professors-08

**10. Faculty Profile:** For Year 2014-2015:

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>	<b>Specialization</b>	<b>Exp (Years)</b>	<b>Ph.D students guided</b>
Dr. V. Upadhyay	M.Sc., Ph.D.	Associate Prof.	Nuclear Physics	35	
Dr. Dinesh Kala	M.Sc. , Ph.D.	Associate Prof.	Electronics	26	-
Dr. H. S. Kalsi	M.Sc. , Ph.D.	Associate Prof.	Electronics	24	-
Dr. DevayaniAwade	M.Sc. , Ph.D.	Assistant Prof.	Communication Electronics, Luminescence	10	-
Mrs. Rama Pandey	M.Sc. M.Phil	Assistant Prof	Electronics	08	
Dr. Mrs. Poonam Agarwal	M.Sc. , Ph.D	Assistant Prof.	Electronics	05	-
Dr. Mrs. Richa Agrawal	M.Sc. , M.Phil, Ph.D	Assistant Prof.	Nuclear Physics	05	
Mr. Jignesh Mehta	M.Sc., NET	Assistant Prof.	Chemical Physics	04	-
Mr. Arvind Singh	M.Sc., NET	Assistant Prof.	Solid State Physics	02	
Dr. SharadTripathi	M.Sc. , Ph.D	Assistant Prof.	Electronics &Communications	07	-
Dr. SandipanM.Nalawde	M.Sc. , Ph.D	Assistant Prof.	Optics	03	-

**11. List of senior visiting faculty:** Nil

**12. Percentage of lectures delivered by temporary faculty:** NA

**13. Student Teacher Ratio:** F.Y.B.Sc ( 50:1 ) S.Y.B.Sc (40:1 ) T.Y.B.Sc ( 8:1) M.Sc ( 5:1)

**14. Number of academic support staff:**Sanctioned-14; Filled-13



**15. Qualification of teaching faculty:** Refer 10

**16. Ongoing projects:** NA

**17. Projects funded and total grants received:** DST –FIST (2014-2015): Rs. 23 lacs.

DBT -STAR grant (2014-2015): 7 lacs

**18. Research Centre:** NA

**19. Publications:**

Faculty	Publications (2010 – August 2015)				Books
	Journals		Conferences/ Seminars		
	International	National	International	National	
Dr. V. S. Upadhyay	02			01	
Dr. D. C. Kala			03		01
Dr. H. S. Kalsi		01	01		01
Dr. DevayaniAwade	04			10	
Mrs. Rama Pandey				01	
Dr. Richa Agrawal				03	
Mr. Jignesh Mehta				01	
Mr. Arvind Singh	06			03	
Dr. SharadTripathi	03			01	
Dr. SandipanNalawade					

**20. Consultancy Projects and Revenue generated:** Nil

**21. Faculty as members in committees:** Nil

**22. Student projects:** Nil

**23. Award / Recognitions:** Best Oral presentation award, awarded at national conference at Guru Nanak College, Sion, Mumbai on Jan. 2014 to DrSharadTripathi

**24. List of eminent academicians and scientists / visitors to the department :**

- Dr. Anil Kakodkar, Former Chairman of DAE.
- Dr. Chidambaran (Scientific Advisor to PM of India)
- Dr. B. M. Arora. Senior Scientist, TIFR.
- Dr. Arnab Bhattacharya, Scientist, TIFR.
- Dr. Sudhir R. Jain, Senior Scientist, BARC.

- Dr. Vinta Deshpande, Head of Physics Department, Institute of Chemical Technology, Mumbai.
- Dr. J. B. Mistry, Ex-Vice Principal and HOD of Physics Department, St. Xavier's College, Mumbai.
- Dr. ArunNarsale, Director, WRIC
- Dr. AnweshMazumdar a prominent scientist from HBCSE.
- Prof. B.D. Chakradeo.
- Prof. Rajan S. Chitaley

**25. Seminar / Conferences / Workshops:** Nil

**26. Student profile course wise:** For 2014-2015

Course/Program	Selected	Enrolled		Pass %
		M	F	
F.Y.B.Sc.	420	206	214	-
S.Y.B.Sc.	133	71	62	-
T.Y.B.Sc.	40	27	13	17.5
M.Sc. I	12	05	07	83.33
M.Sc. II	12	05	07	41.66

**27. Diversity of Students – Overall for all the courses:**

Same State (%)	Other State (%)	International (%)
97.1	2.9	Nil

**28. Students cleared competitive examinations:** Data not available

**29. Students Progression:**

Students Progression	Against % enrolled
UG to PG	6.45
PG TO M.Phil	Data not available
PG to Ph.D	Data not available
Ph.D to Post-Doctoral	Data not available
Employed <ul style="list-style-type: none"> <li>• Campus selection</li> <li>• Other than campus</li> </ul>	Data not available

Entrepreneurship / Self-employment
------------------------------------

Data not available
--------------------

### 30. Details of infrastructural facilities:

- a) Library : Separate departmental Library for UG and PG  
Physics Books in Library = 3850. Physics Books in Dept. library = 192
- b) Internet Facilities for staff and students : Available
- c) Classrooms with ICT Facility : Nil
- d) Laboratories : 3 (ICT facility laboratories 02)

### 31. Financial assistance for students: NA

### 32. Details on student enrichment programs with external experts:

#### 2010-11

1. Lecture on “Doing experiments in Physics” by Mr. Shirish Pathare of HBCSE on 31.7.10.
2. Lecture on “Expedition to Antarctica” by Dr. Ajay Dhar of Indian Institute of Geomagnetism on 21.8.10.
3. Lecture on “Quantum Gravity” by Prof. Padmanabhan of IUCAA on 11.2.11.

#### 2011-12

1. A lecture on “Currents trends in Astronomy” by Dr. Anwesh Majumdar of HBCSE on 30.7.11.
2. Lecture on “Physics of Photography” by Prof. Srikant Malushte in August 2012.
3. Lecture on “Classical to quantum” by Dr. Sudhir Jain of BARC on 24.9.11.
4. Lecture on “ Sustainable Energy Security for India: Challenges and Options” by Dr. Anil Kakodkar, Former Chairman of DAE on 24.2.12.

#### 2012-13

1. Lecture on “Color Appearance: A Metamorphosis” by Dr. Vinta Deshpande, Head of Physics Department, ICT, on 21.7.13
2. Lecture on “Joy of Optics” by Dr. J. B. Mistry, Ex-Vice Principal and HOD of Physics Department of St. Xavier’s College in 25.8.2012.
3. Lecture on “Aerial and Space sensors: Surveillance tools in war and peace”, by Dr. H. Samant, Head, Dept. of Geology St. Xavier’s College on 6.10.12.

#### 2013-14

1. Lecture on “Physics through experiments” by B.D.Chakradev and associates for first and second year B.Sc. students on 26<sup>th</sup> July 2014. Demonstration of the physics were nicely conducted and co-related to day to day life.
2. Lecture by RajanS.Chitale on “Journey from circuits to systems in electronics” on 6<sup>th</sup> September 2014 at 11.30 am.

**33. Teaching methods adopted to improve student learning:** Demonstrations, simulations, videos, animations, guest lectures, Industrial visits/ Educational trips

**34. Participation in institutional social responsibility and extension activities:**

- Students and faculty members are involved in NSS activities.

**35. SWOC analysis and future plans:**

Strength	Weakness	Opportunities	Challenges
<ul style="list-style-type: none"> <li>• Well-equipped lab with latest instruments</li> <li>• 08 faculty are PhD holders</li> </ul>	<ul style="list-style-type: none"> <li>• Academically weak students at entry level</li> <li>• Insufficient Alumni interaction</li> <li>• High student to teacher ratio due to Credit based system</li> </ul>	<ul style="list-style-type: none"> <li>• PG lab recognized for M.Sc. by research in 2014</li> <li>• Dept. has applied for Ph.D lab recognition.</li> <li>• Under FIST and STAR college grant we are enabled to conduct more certificate courses.</li> <li>• Teaching can be done with demonstrations.</li> </ul>	<ul style="list-style-type: none"> <li>• Interest of students towards basic sciences is declining because of lack of lucrative job opportunities.</li> <li>• Declining quality of students at UG/PG entry level.</li> </ul>

**Future Plans:**

- To organize more workshops and seminars for students and staff.
- To organize National and International conferences.
- To introduce more value added certificate courses.
- Ever open to introduce more innovative and interactive modes & methods of teaching.
- Plan to make Physics laboratories “Green” viz. plan to run on solar energy only.
- Plan to make at least one laboratory for inter disciplinary research.

\*\*\*



F. No 5-73/13(WRO)

Date: 27.03.2014

The Principal,  
Guru Nanak Khalsa College Of Arts Science & Commerce,  
King'S Circle,  
Matunga,  
Mumbai - 400019.

Subject: XII Plan allocation under General Development Assistance to Colleges.

Sir/Madam,

I am directed to convey the approval of the UGC to **Guru Nanak Khalsa College Of Arts Science & Commerce, Matunga, Mumbai- 400019** the XII plan allocation of Rs.4448650/- under "General Development Assistance" for the development of undergraduate and postgraduate education. The UGC in the XII Plan has decided to provide grants under General Development Assistance as 'Block Grant'. The college will have the flexibility to incur expenditure under the following heads as per needs of the college. Accordingly, grant allocated under GDA to the college is under two object heads Grant-in-aid General (31) and Capital Assets (35).

Capital Assets (35) 80% of total allocation	Grant-in-aid General (31) 20% of total allocation	Total
Rs.3558920/-	Rs.889730/-	Rs.4448650/-

- The above mentioned allocation is meant for the development of undergraduate and postgraduate education.
- The college has to constitute a Planning Board with Principal as Chairman and Heads of department IQAC Coordinator, Librarian & Bursar/Senior person from the Accounts department as members
- The Planning Board will finalize allocation to Undergraduate and Postgraduate departments after identifying the heads and deciding on priorities of departments.
- The eligibility criteria for Undergraduate and Postgraduate departments to get assistance under the scheme is given in the XII plan guidelines for Development grant to colleges.
- The Planning Board may refer to the guidelines before finalizing allocation to Undergraduate & Postgraduate departments
- After finalizing the budget allocation for Undergraduate and Postgraduate education, the Planning Board should submit the details as per Annexure - I and Annexure - II in the XII plan guidelines to the UGC (WRO), Pune latest by 30<sup>th</sup> June 2014.
- Expenditure on construction, extension, and renovation of building should not exceed 50% of the total grant under GDA. The college must inform the requirement of funds for construction, extension, and renovation of building before 30<sup>th</sup> June, 2014 to enable further release of grant under the scheme.
- UGC has already released adhoc on account grant to the college against this XII Plan allocation

- The concept of Merged Schemes introduced during the XI Plan has been done away with and no separate grant under the Merged Schemes will be provided during the XII Plan.
- It is also mentioned here that the following schemes which were earlier part of Merged Scheme now will be implemented independently by a dedicated cell of UGC at Head Quarter, New Delhi and separate grant will be provided by UGC under these schemes.
  - (i) Equal Opportunity Cell.
  - (ii) Remedial Coaching for SC/ST/OBC (non-creamy layer) and minority community students.
  - (iii) Coaching for NET for SC/ST/OBC (non-creamy layer) and minority community students.
  - (iv) Coaching Classes for Entry into services for SC/ST/OBC (non-creamy layer) and minority community students.
  - (v) Scheme for persons with disabilities.

Yours sincerely,

*R. Batra*

[Dr. (Mrs.) Renu Batra  
Joint Secretary.

Copy to:

1. The Director BCUD/CDC University of Mumbai
2. The Director, Higher Education, Govt of Maharashtra, Central Building Pune-1.
3. Account General, Govt of Maharashtra state, 101, Maharshi Karve Marg, Mumbai -20.
4. Guard file.

*P. Batra*

[Dr. (Mrs.) Renu Batra  
Joint Secretary.

UNIVERSITY GRANTS COMMISSION

Western Regional Office  
Ganeshkhind, Pune - 411007

Phones: (020) 25691477  
25691178 25696897  
Fax: (020) 25691477  
Web site: [www.ugc.ac.in](http://www.ugc.ac.in)

No. F.5-73/13 (WRO) XII Plan.

Dated:

The DDO  
University Grants Commission (WRO)  
Pune-411 007.

05 MAR 2014

**Subject:** Release of "Adhoc on Account Grant" under the Scheme of Under Graduate Development Assistance during XII Plan period.

Sir/Madam,

I am directed to convey the sanction of the Commission for payment of Rs.285000/- (Rupees two lakhs eighty five thousand only) to GURU NANAK KHALSA COLLEGE OF ARTS SCIENCE & COMMERCE, KING'S CIRCLE, MATUNGA, MUMBAI -400019 as an adhoc grant for the XII plan period in addition to grant already released.

XI Plan Allocation	25% of XI Plan Grant already sanctioned	15% of XI Plan Grant	Total Grant sanction (40%)	XII Plan Provisional Sanction (Adhoc)	
				Grant-in-aid /Recurring (31)	
1900000	475000	285000	760000	85500	199500
				Capital Assets (35)	285000
				Total	

The sanction amount is debatable to head of account as detailed below.

XII Plan Provisional Allocation	Amount sanction (Rs.)	For SC 15% (Rs.)	For ST 7.5% (Rs.)	For GENERAL (77.5%) (Rs.)
Grant-in-aid /Recurring (31)	85500	12825	6413	66263
Capital Assets (35)	199500	29925	14963	154613

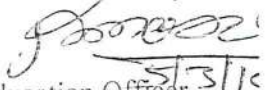
- The sanctioned grant may be treated as " Adhoc On account" grant for XII Plan. The grant sanctioned now would be adjusted against the XII Plan allocation to be made subsequently.
  - The grant shall not be used for self-financing/ non-grant/unaided courses & teachers.
  - If it come to our notice that the college is Self-finance. The entire amount has to be refunded to UGC(WRO), Pune with penal interest @ 10% per annum.
  - The grant can be used for items e.g. renovation/addition/alteration of building (including renovation of heritage building), books & journals, equipments, laboratory, connectivity, career and counseling cell, cultural activities, day care center, annual maintenance contract and development of ICT, Human Rights & Duties Education (HRDE) and instrumentation Maintenance facilities (IMF) etc. College may incur the expenditure as per XII Plan guidelines which have been uploaded on UGC website i. e. [www.ugc.ac.in](http://www.ugc.ac.in).
- The sanctioned amount is debitable to the major Head 2 (B) for General, 2D(i) for SC, 2D(ii) for ST respectively and is valid for the financial year 2013-14
  - The amount of the grants shall be drawn by the Account Officer (DDO), UGC (WRO), Pune on the Grants-in-aid bill and shall be disbursed to and credited to the Principal of the college through Electronic mode as per the following details:

a	Details (Name & Address) of Accounts Holder:	The Principal, GURU NANAK KHALSA COLLEGE OF ARTS SCIENCE & COMMERCE, MATUNGA, MUMBAI- 400019.
b	Account No.:	60008530114
c	Name & Address of Bank Branch:	BANK OF MAHARASHTRA, KINGS CIRCLE, MUMBAI
d	MICR Code:	
e	IFSC Code:	MAHB0000339
	Type of Account	Saving Bank Account

KHALSA COLLEGE, MUMBAI-19.  
INWARD NO. 61  
DATE 14/3/2014  
FORWARDED TO  
Principal  
MOA

3. The grant is subject to adjustment on the basis of Utilization Certificate in the prescribed Proforma submitted by the University/ College/ Institution.
4. The University/ College shall maintain proper accounts of the expenditure out of the grants, which shall be utilized, only on approved items of expenditure.
5. The University/ Institution may follow the General Financial Rules, 2005 and take urgent necessary action to amend their manuals of financial procedures to bring them in conformity with GFRs, 2005 and those don't have their own approved manuals on financial procedures may adopt the provision of GFRs, 2005 and instruction/ guideline there under from time to time.
6. The Utilization Certificate to the effect that the grant has been utilized for the purpose for which it has been sanctioned shall be furnished to UGC as early as possible after the close of current financial year.
7. The assets acquired wholly or substantially out of UGC's grant, shall not be disposed of or encumbered or utilized for purposes other than those for which the grant was given, without proper sanction of the UGC, and should at any time the College cease to function, such assets shall revert to the University Grants Commission.
8. A Register of the assets acquired wholly or substantially out of the grant shall be maintained by the University/ College in the prescribed proforma.
9. The grantee institution shall ensure the utilization of grants-in-aid for which it is being sanctioned/ paid. In case non-utilization / part utilization, the simple interest @ 10% per annum as amended from time to time on utilization amount from the date of draw to the date of refund, as per provision contained in General Financial Rules of Govt. of India will be charged.
10. The Univ./College shall follow strictly the Government of India/ UGC's guidelines regarding implementation of the reservation policy [both vertical (for SC, ST & OBC) and horizontal [for persons with disability etc.]] in teaching and non-teaching posts.
11. The University/ College shall fully implement to Official Language Policy of Union Govt. and comply with the Official Language Act, 1963 and Official Languages (use for official purposes of the Union) Rules, 1976 etc.
12. The sanction issues in exercise of the delegation of powers vide Commission office order No. 130/2013 [F. No. 10-11/12 (Admn. IA & B)] dated 28/5/2013.
13. The University/ Institution shall strictly follow the UGC Regulations on curbing the menace of Ragging in Higher Education Institutions, 2009.
14. The University/ Institution shall take immediate action for its accreditation by National Assessment & Accreditation Council (NAAC).
15. The accounts of the University/ Institution will be open for audit by the Comptroller & Auditor General of India in accordance with the provisions of General Financial Rules, 2005.
16. The annual accounts i.e. balance sheet, income and expenditure statement and statement of receipts and payments are to be prepared strictly in accordance with the Uniform Format of Accounting prescribed by Government.
17. Funds to the extent of Rs. \_\_\_\_\_ are available under the Scheme.
18. This issues with the concurrence of IFD vide Diary No. 27957 & No.7411 dated 25.02.2014 & 21.02.2014.
19. This issues with the approval of Head of the Office vide Sanction File No 5-73/13.

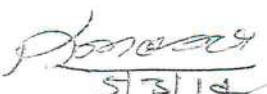
Yours faithfully

  
5/3/14  
Education Officer  
(Naresh Pal Meena)

Copies forwarded for information and necessary action to:

- i) The Principal,  
GURU NANAK KHALSA COLLEGE OF ARTS SCIENCE &  
COMMERCE  
KING'S CIRCLE, MATUNGA  
MUMBAI- 400019
- ii) The Director, B.C.U.D./ C.D.C. University of Mumbai
- iii) The Director/Commissioner, Higher Education, Govt. of Maharashtra, Central  
Building Pune-1.
- iv) Accountant General, Govt. of Maharashtra state, 101, Maharshi Karve Marg, Mumbai -20.
- v) Guard File.

Sr. No \_\_\_\_\_  
Prog. Total. \_\_\_\_\_

  
5/3/14  
Education Officer  
(Naresh Pal Meena)





SHIROMANI GURUDWARA PRABANDHAK COMMITTEE'S  
Guru Nanak Khalsa College of Arts, Science & Commerce  
(Affiliated to University of Mumbai and Recognized by Govt. of Maharashtra)

---

**CERTIFICATE OF COMPLIANCE**

This is to certify that **Guru Nanak Khalsa College of Arts, Science & Commerce, Nathalal Parekh Marg, King's Circle, Matunga, Mumbai – 400 019**, fulfils all norms

1. Stipulated by the **University of Mumbai** ie. affiliating University and the affiliation and/or
2. Regulatory Council / Body (such as **UGC**, NCTE, AICTE, MCI, DCI, BCI, etc) and
3. The affiliation and recognition is valid as on date.

In case the affiliation / recognition is conditional, then a detailed enclosure with regard to compliance of conditions by the institution will be sent.

It is noted that NAAC's accreditation, if granted, shall stand cancelled automatically, once the Institution loses its University affiliation or Recognition by the Regulatory Council, as the case may be.

In case the undertaking submitted by the Institution is found to be false then the accreditation given by NAAC is liable to be withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the College website.

Date: 26 November 2015  
Place: Mumbai – 19

  
(Dr. Kiran Mangaonkar)  
**PRINCIPAL**  
**G.N. KHALSA COLLEGE**  
**MATUNGA, MUMBAI - 400 019**



Government of India

Ministry of Human Resource Development

Department of Higher Education

Statistics Division

New Delhi

# Certificate



**Reference No.** C-34174-2014

This is to certify that KIRAN V MANGAONKAR of Guru Nanak Khalsa College of Arts Science & Commerce Kings Circle Matunga Mumbai 400 019 has successfully uploaded the data of All India Survey on Higher Education(AISHE) 2014-2015.

( B N Tiwari )

Deputy Director General

**Dated:** 20/11/2015