

**DEPARTMENT OF STATISTICS
KUMAUN UNIVERSITY, NAINITAL**

INTRODUCTION

The science of **Statistics** has progressed leaves and bounds conforming the prophecy of Professor H.W.Wells that “statistical thinking will one day be as necessary for effective citizenship as the ability to read and write”. It is rather impossible even to think of any field of knowledge viz., literature, social, behavioural, natural and physical sciences, business, commerce, industry, agriculture, medical sciences, etc., which do not apply **Statistics** for their advancement and wider applicability for the human beings. **Statistics** has become indispensable for every phase of human endeavour. One can easily say that modern culture and life has become statistical culture.

The Statistics department is situated at two campuses, viz., S.S.J.Campus, Almora and D.S.B.Campus, Nainital. The department is running U.G and P.G courses in Statistics successfully for many years. The department is presently running short of building, infrastructure and faculty. The department is running short of permanent faculty, non teaching staff (class III and class IV) and proper infrastructure.

The Statistics department at **S.S.J.Campus, Almora** has excellent teaching and research records and its students are well placed in various Central/ State services and Multinational companies. The department is using advanced teaching methods to equip its students with latest technologies. Regular seminars and symposiums are also organized by the PG students of the department. Students are also encouraged to take Project Work (Dissertation) in the final year of post graduation. The department is also organizing guest lectures from eminent statisticians from India and abroad. The department is also doing collaborative work with renowned statisticians from Pensilvania State University, USA, I.I.M. Bangalore, I.S.I. Kolkata, University of Delhi, University of Lucknow, University of Jammu, etc. At present, the department is also running three major projects funded by UGC, ICMR and UCOST. Six persons are working under these projects as JRF/Research Assistant. In general, the department is trying to provide high quality education and research facilities to its students despite of the constraints of teaching and non-teaching staff, building and infrastructure.

BREIF ABSTRACT OF COURSES AT UG & PG LEVEL:

The department is running three year UG program with Statistics as a subject. In UG classes many important courses, such as Statistical Methods, Probability, Applied Statistics, Sampling Theory, Statistical Inference, Design of Experiments, Multivariate Regression Analysis, Quality Control, Numerical Methods and Non parametric Inference are taught using latest teaching methods.

The department is running two year PG program since 2003. The department is going to start semester system for its PG program from the session 2010-11. In PG program, the department is providing quality education with stress on theoretical, practical and computational knowledge.

Semester-wise Distribution of subjects with marks for PG course is as follows:

SEMESTER I

PAPER 1	PROBABILITY THEORY	- 100 marks
PAPER 2	ADVANCED ANALYSIS AND MATRIX THEORY	- 100 marks
PAPER 3	STATISTICAL METHODS	- 100 marks
PAPER 4	PRACTICAL	-100 marks

SEMESTER II

PAPER 1	SAMPLING THEORY	-100 marks
PAPER 2	LINEAR ESTIMATION AND DESIGN OF EXPERIMENT	-100 marks
PAPER 3	STATISTICAL INFERENCE	-100 marks
PAPER 4	PRACTICAL	-100 marks

SEMESTER III

PAPER 1	MULTIVARIATE ANALYSIS	-100 marks
PAPER 2	BIOINFORMATICS	-100 marks
PAPER 3	REGRESSION ANALYSIS AND TIME SERIES	-100 marks
PAPER 4	PRACTICAL	-100 marks

SEMESTER IV

PAPER 1	STOCHASTIC PROCESS AND RELIABILITY THEORY	-100 marks
PAPER 2	STATISTICAL COMPUTING	-100 marks
PAPER 3	PROJECT WORK (DISSERTATION)/OPTIONAL PAPER	-100 marks

Students not opting for the Project Work (Dissertation) will have to attempt one of the following papers:

- (a) **OPERATIONS RESEARCH** -100 marks
- (b) **ECONOMIC STATISTICS AND DEMOGRAPHY** -100 marks
- (c) **ECONOMETRICS** -100 marks

(d) **ACTUARIAL STATISTICS**

-100 marks

PAPER 4 **PRACTICAL-100 mark**

INFRASTRUCTURE INCLUDING LABORATORIES AND EQUIPMENT:

(i). S.S.J.campus, Almora:

There is no separate building for the department. The department at S.S.J.Campus, Almora has only three rooms and one small class room/ lab. The department has requested the university to provide it suitable space in the newly constructed building of Mathematics and Statistics in the campus and is expecting to shift in the new building soon. The department has the following equipments at present:

- a) One branded computer system with (P-4) with laser printer and scanner.
- b) One assembled computer (old P-2) with laser printer
- c) Xe-rox machine (digital/ TOSHIBA)
- d) Multimedia LCD(HITACHI)
- e) OHP
- f) Statistical calculators – 7
- g) Calculators for practical classes – 86
- h) Telephone – 1

(ii). D.S.B.Campus, Nainital:

There is no separate building for the department at D.S.B. Campus, Nainital also. The exact information about infrastructure is not available.

NUMBER OF SEATS WITH SPECIALISATION OF COURSES:

(i). S.S.J.Campus, Almora

Undergraduate level (B.A/B.Sc) - 50 seats
Postgraduate level (M.A/M.Sc) - 10 seats

(ii). D.S.B.Campus, Nainital

Undergraduate level (B.A/B.Sc) - 35 seats
Postgraduate level (M.A/M.Sc) - 10 seats

NAME AND DESIGNATION OF FACULTY MEMBERS:

(i). S.S.J.Campus, Almora:

NAME	DESIGNATION
DR NEERAJ TIWARI	ASSOCIATE PROFESSOR
DR SPERSH BHATT	TEACHING PERSONNEL(Contract)
MR GIRJA SHANKAR PANDEY	TEACHING PERSONNEL(Contract)

(ii). D.S.B.Campus, Nainital:

NAME	DESIGNATION
DR M.K.PANDE	ASSOCIATE PROFESSOR
DR SURENDRA KUMAR	ASSISTANT PROFESSOR

RESEARCH ACTIVITIES: THE MAIN THRUST AREAS OF RESEARCH WITH SPECIALIZATION:

(i). S.S.J.Campus, Almora:

The department is pursuing excellent research work of international standards. The research papers of one faculty are published in reputed international journals such as, Journal Of Statistical Planning And Inference(USA), Communications in Theory and Methods(USA), Statistics and Probability Letters (USA), Journal of Quantitative Linguistics(Germany), International Journal of Health Geographics(UK), Scandinavian Journal of Statistics, etc. The department is also running three major projects funded by UGC, ICMR and UCOST, in which six JRF/RA/ Field Assistants are working. The department is regularly organizing Guest lectures of renowned Statisticians from India and abroad. A faculty member of the department is regularly visiting foreign countries such as USA, China and Czech Republic to attend International Conferences/ Workshops. The faculty member is also invited to deliver lectures/research discussions on various research topics by Indian Statistical Institute, Kolkata, I.A.S.R.I, New Delhi, I.I.M, Bangalore, UGC Academic Staff College, Nainital, H.N.B Garhwal Central University, Srinagar, etc. The faculty member is also reviewing Research Projects as a reviewer from UGC, Hongkong and research papers for international journals such as

Communications in Statistics, International Journal of Health Geographics, etc. The main thrust areas of research in the department are as follows-

1. Sample Surveys
2. Sequential Estimation
3. Life Testing and Reliability
4. Environmental Statistics
5. Health Geo-Statistics
6. Quantitative Linguistics
7. Vital and Economic Statistics

(ii). D.S.B.Campus, Nainital:

The main thrust areas of research in the department are as follows-

1. Sample Surveys
2. Life Testing and Reliability

SPONSORED RESEARCH PROJECTS WITH TITLE, PRINCIPAL INVESTIGATOR AND FUNDING AGENCIES:

(i). S.S.J.Campus, Almora:

TITLE	PRINCIPAL INVESTIGATOR	FUNDING AGENCY
'Geo-Statistical investigation of vector borne diseases in Kumaon Region of Uttarakhand in Relation to climatic change and Socio-economic conditions.'	DR NEERAJ TIWARI	UGC, New Delhi
'Investigation of Geo-Spatial hotspots for the occurrence of tuberculosis in Kumaon region of Uttarakhand using GIS and spatial scan statistic.'	DR NEERAJ TIWARI	ICMR, New Delhi
'Detection of geo-spatial hotspots for enteric diseases using GIS and spatial scan statistic and to study the effect of water pollution on physical and mental health of residents of Almora and Nainital district of Uttarakhand.'	DR NEERAJ TIWARI	UCOST, Dehradun

(ii). D.S.B.Campus, Nainital: NIL

WORKSHOPS, SEMINARS, SYMPOSIA ORGANISED:

(i). S.S.J.Campus, Almora:

Regular seminars are organized in the department by PG and research students. Lectures by eminent statisticians from India and abroad are being organized in the department. The department is going to organize a Refresher Course in Statistics & Mathematics in November 2010. The department is also planning to organize an international workshop in near future.

(ii). D.S.B.Campus, Nainital: NONE

NUMBER OF RESEARCH PUBLICATIONS FROM THE DEPARTMENT:

(i). S.S.J.Campus, Almora:

Research Papers of Dr. Neeraj Tiwari:

- (a) number of papers published in international journals: 15
- (b) number of papers published in national journals: 03
- (c) number of papers communicated: 05
- (d) number of papers presented in seminars/ conferences: 25
- (e) number of books published : None

(ii). D.S.B.Campus, Nainital: Information Not Available

CONTACTS OF FACULTY MEMBERS

(i). S.S.J.Campus, ALMORA:

NAME	OFFICE	RESIDENCE	MOBILE	EMAIL
DR NEERAJ TIWARI	(05962) 231148	(05962)236030	09412951904	kumarn_amo@yahoo.com
DR SPERSH BHATT	-DO-	(05942)236909	09412034974	ku_stat@indiatimes.com
MR GIRJA SHANKAR PANDEY	-DO-	(05963)250163	09456309711	pandeygirja@yahoo.co.in

(ii). D.S.B.Campus, Nainital

NAME	OFFICE	RESIDENCE	MOBILE	EMAIL
DR M.K.PANDE	NA	(05942)238373	NA	NA
DR SURENDRA KUMAR	NA	(05942)235157	NA	NA

NUMBER OF STUDENTS AWARDED Ph.D:

(i). S.S.J.Campus, Almora : 03 (All under Dr. Neeraj Tiwari)

(ii). D.S.B. Campus, Nainital: 02 (One under Dr. M.K.Pande and one under Dr. Surendra Kumar)

PROPOSED ACTIVITIES IN FUTURE AT SSJ CAMPUS ALMORA:

The Statistics department at S.S.J.Campus, Almora is going to organize a Refresher Course in Statistics and Mathematics in November 2010. The Department is also going to organize Popular Lectures by Prof. Pulak Ghosh in July/August 2010, sponsored by Uttarakhand Council of Science & Technology, Dehradun. The department is also planning to organize an International Workshop on 'Applications of Statistics' in near future. The department is also planning to start M.Phil. in statistics and two one year certificate courses in 'Statistical Computing' And 'Statistical Quality Management'.