

# PATNA UNIVERSITY

Department of Statistics

(Patna Science College Campus)

Patna – 800005, Bihar, India



**INFORMATION BROCHURE**  
**Master of Computer Applications(MCA)**  
**3-year Full Time Post Graduate Course**  
**(Self Financing)**  
**Ph. : +91-612-2660034**

## **DEPARTMENT OF STATISTICS : A GENERAL PROFILE**

The Department of Statistics, Patna University, the fourth oldest Department of Statistics in India was established in 1949 for teaching Statistics at the Master's level ( M.A. and M.Sc. level) and providing guidance to research scholars leading to the PH.D. Degree in Statistics. The teaching of the subject at the undergraduate level began in 1956 to cater the needs of all the colleges under Patna University. After opening of a separate Undergraduate Department of Statistics at B.N. College in 1980, the students of other colleges continue to attend classes at this Department.

Besides M.A. / M.Sc. course in Statistics, the Department has been conducting a One-Year Postgraduate Diploma Course in Computer Applications and One-year Postgraduate Diploma in Actuarial Science under self- financing scheme.

The Department is located in the half portion of the building known as Mathematics / Statistics Block in the Patna Science College campus. It has two fully air conditioned computer laboratories and an air conditioned server room with state-of-the-art computer systems with the internet facilities, ceiling fitted LCD projectors, etc. The Department owns a number of softwares and it has a very rich library having a good collection of books and journals of Statistics, Computer Science and Mathematics.

There is a Population Research Centre attached with this Department. The Head of the Department of Statistics is ex-officio Honorary Director of this Centre. It is funded by the Ministry of Health and Family Welfare, Government of India. The main function of the Centre is to conduct statistical investigations in the fields such as population, health and family welfare, etc.

## **OBJECTIVE OF M.C.A. COURSE**

The M.C.A. course is started in the Department of Statistics, Patna University, with an objective to prepare students for productive careers in technological research, software industries, banking and other related sectors. The main aim is to make the students competent software professionals to meet the demands of the fast growing IT industry at the national and also at the global level. The course emphasizes the applications of software technology to solve various scientific, commercial, networking and computing problems. After the successful completion of this course students could get a wide range of jobs in various multinational companies, private sectors, government organizations, banks etc.

## **ADMISSION TO THE M.C.A. COURSE**

- ❖ A candidate seeking admission to M.C.A. course must be B.C.A. or B.Sc. in Computer Science or Graduate ( Honours) in any stream with Mathematics as a subject plus a certificate or equivalent qualification in computing of at least one

year duration from a recognized institution. The candidate must have secured atleast 45% marks in the above graduate level qualifying examination.

- ❖ A candidate seeking admission to Semester I M.C.A. course will have to secure a proper place in the merit list prepared on the basis of an entrance examination conducted by Patna University. The written test will be of 100 marks consisting of 85 objective type questions, each question carrying one mark and 5 subjective questions, each question carrying three marks.
- ❖ Admission to N.R.I. students will be made on the basis of an entrance examination. However, a separate list of N.R.I. candidates will be prepared based on the same entrance examination.
- ❖ The reservation of seats for the course will be as per reservation rules of the Government of Bihar.
- ❖ The number of seats for the course will be 40. In addition there will be five seats for N.R.I. candidates.
- ❖ No candidate (NRI or RI ) will be admitted to the course unless he/she has secured atleast 33% marks in the entrance examination.

## **COURSE DURATION AND EXAMINATION**

- ❖ The M.C.A. course is a full time course of three years duration. However, no student will be permitted to continue if he/she fails to pass all semesters in a maximum period of five years from the date of first admission.
- ❖ The academic program will be based on semester system, two semesters in a year. The courses offered in a semester will be continually assessed and evaluated to judge the performance of a student on the basis of internal assessment. The components of the internal assessment shall be
  - Two mid-test each of 15 marks
  - One home assignment of ten marks
- ❖ There will be a University Examination at the end of each semester.
- ❖ A student will have to pass separately in each paper ( Theory and Practical) of each semester before he/she is promoted to the next semester.
- ❖ In order to pass M.C.A. examination of any semester, a candidate shall have to secure atleast 40% marks of the maximum marks in each paper.
- ❖ No division will be awarded upto fifth semester. Successful candidates in all the semester examinations will be awarded the division at the end of the final semester examination taking the aggregate of marks obtained in all the semesters. The pass marks is 45%.

## **COURSE STRUCTURE**

The course structure of M.C.a shall be as follows.

### Semester I

Code	Course Title	Internal Assessment	Semester Exam	Total
<b>CS 101</b>	Introduction to Computing and its Applications	40	60	100
<b>CS 102</b>	Mathematical Foundations	40	60	100
<b>Cs 103</b>	Introduction to Programming Paradigms	40	60	100
<b>Cs 104</b>	Statistical Techniques	40	60	100
<b>CS 105</b>	Business Data processing and File System	40	60	100
<b>CS 106</b>	Lab-I(Programming in C + Linux Os)	40	60	100
<b>Cs 107</b>	Lab-II ( STAT + BDFS)	40	60	100

### Semester II

Code	Course Title	Internal Assessment	Semester Exam	Total
<b>CS 201</b>	Computer Architecture	40	60	100
<b>CS 202</b>	Data Structure and Program Design	40	60	100
<b>Cs 203</b>	Object Oriented Programming	40	60	100
<b>Cs 204</b>	Database Management System	40	60	100
<b>CS 205</b>	Object Oriented Analysis and Design	40	60	100
<b>CS 206</b>	Lab-III ( OOP + Core Java)	40	60	100
<b>Cs 207</b>	Lab-IV ( OOAD + DBMS)	40	60	100

### Semester III

Code	Course Title	Internal Assessment	Semester Exam	Total
<b>CS 301</b>	Operating System	40	60	100
<b>CS 302</b>	Data Communications and Computer Networks	40	60	100
<b>Cs 303</b>	Analysis and Design of Algorithms	40	60	100
<b>Cs 304</b>	Software Engineering	40	60	100
<b>CS 305</b>	Computer Graphics and Animation	40	60	100
<b>CS 306</b>	Lab-V ( OS + CN + CG)	40	60	100
<b>Cs 307</b>	Lab-VI ( ADA + SE )	40	60	100

### Semester IV

Code	Course Title	Internal Assessment	Semester Exam	Total
<b>CS 401</b>	Compiler Design	40	60	100
<b>CS 402</b>	Internet Applications and Web Programming	40	60	100
<b>Cs 403</b>	Information Security	40	60	100
<b>Cs 404</b>	Software Testing and Quality Assurance	40	60	100
<b>CS 405</b>	Multimedia Applications	40	60	100
<b>CS 406</b>	Lab-VII ( Javascript + Net)	40	60	100
<b>Cs 407</b>	Lab-VIII(STQA + MA +CD)	40	60	100

## Semester V

Code	Course Title	Internal Assessment	Semester Exam	Total
<b>CS 501</b>	System Programming	40	60	100
<b>CS 502</b>	Artificial Intelligence	40	60	100
<b>Cs 503</b>	Elective I	40	60	100
<b>Cs 504</b>	Elective II	40	60	100
<b>CS 505</b>	Elective III	40	60	100
<b>CS 506</b>	Lab-I( AI + SP)	40	60	100
<b>Cs 507</b>	Lab-II (Electives)	40	60	100

## Semester VI

Code	Internal Assessment	Semester Exam	Total
<b>CS 601</b>	100*	400**	500

\* Mid term assessment of project progress

\*\* Project Report Evaluation : 200 + Comprehensive Viva Voce : 200

**Grand Total – 4500**

### Elective Courses:

Group I	Data Mining and Warehousing	Advance DBMS	Multimedia Databases
Group II	Network Management	Network Programming	Advance Internet Tech.
Group III	Soft Computing	Robotics	Knowledge Management
Group IV	Principles of Wireless LAN	Advanced JAVA	E Commerece

Every student shall have to select one elective group of three papers from the four elective groups.

### ATTENDANCE:

A candidate appearing at any semester examination will be required to attend at least 75% of the lectures delivered and of the practical classes held separately in each paper.

### FEE STRUCTURE :

The fee structure of the course will be as follows.

#### A. For Indian Students ( RI)

Admission	
Caution Money ( Refundable) one time subject to completion of the course	
Development Fees in the First Semester	
Miscellaneous Fee in the First Semester	
Tuition Fees per semester	
Examination Fee	
<b>Total fees payable at the time of admission</b>	

RI Students will have to pay Rs. 36,000/- for the first semester and thereafter Rs.9,000/- per semester from 2<sup>nd</sup> to 6<sup>th</sup> semester

#### B. For Non resident Indian (NRI)

Admission	
Caution Money ( Refundable) one time subject to completion of the course	
Development Fees in the First Semester	
Miscellaneous Fee in the First Semester	
Tuition Fees per semester	
Examination Fee	
<b>Total fees payable at the time of admission</b>	

NRI Students will have to pay \$1,000 for the first semester and thereafter \$400 per semester from 2<sup>nd</sup> to 6<sup>th</sup> semester

## **ENTRANCE TEST :**

- ❖ Entrance test for admission to the M.C.a. course will be a written test of 100 marks. The written test will be of one and a half hour duration. There will be 85 objective type questions, each carrying one mark and five subjective type questions, each carrying three marks. There will be questions on logical and mathematical ability, general awareness, fundamentals of computer and English.
- ❖ The question paper will be provided in English only.
- ❖ The list of the selected candidates and any other further direction will be displayed on the Notice Board of the Department of Statistics, Patna University as well as on the official website.
- ❖ The admit card for the entrance examination will be given to the candidates at the certain period of time before the test.

## **HOW TO APPLY :**

The applicants will be required to apply online in the prescribed application form to the "Head/ Course Coordinator, Department of Statistics, Patna University, Patna ". The application form and the prospectus is available on the website of MCA course, Department of Statistics, Patna University. The applicant has a bank draft of Rs.1,000 /- payable at 'Head of the Department of Statistics, Patna University, payable at Patna'. No additional fee for the entrance examination will be charged. The applicant has to submit a application form, DD, Caste certificate, graduation result after the successful submission of Online Application.

## **For any further details please contact**

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Website : [www.statpu.in](http://www.statpu.in)

Course Co-ordinator  
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