



Dr. Shyama Prasad Mukherjee University, Ranchi
Following Up-graded Ranchi College
(NAAC Accredited B++)

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**ADMISSION FROM
CUM
INFORMATION BROCHURE**

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BACHLOR OF ELECTRONICS (B.Sc. Electronics)

Under Post Graduate Department of Physics

Dr. Shyama Prasad Mukherjee University, Ranchi



Vice-Chancellor's Desk

My Vision for Dr. Shyama Prasad Mukherjee University, Ranchi

Dr. Shyama Prasad Mukherjee University, Ranchi is a synthesis of a legacy of 92 years of hard work, dedication and incomparable team work in the area of academic excellence that incessantly worked together under the banner of Ranchi College, Ranchi.

Hardly a year ago, that is, on Tuesday, April 11, 2017, this college was upgraded as a Unitary State University under RUSA Program. I find myself privileged enough to serve this institution earlier as a Professor and now a Vice-Chancellor. Knowing its fabric from interior to exterior, I know the responsibility that we have to shoulder on together in coming years is high.

As we have become the cynosure of academic arena of the state, we know that we have to carve out a niche for ourselves. We aspire to turn it into the most sought-after University of Central India. Also, we have to be ready to cater the massive pool of the students in coming years. To march ahead with all gravity maintaining the centripetal force attached with its legacy and let the University levitate towards zenith, we set forth the following goals:

1. To expand not only in infrastructure but also in setting the curriculum as such based on multi-disciplinary branches of education maintaining the local, national and International requirements.
2. To delve deep into Research and development, promoting original research and making it a hub of internationally acclaimed human resources.
3. Making it digitally equipped, culturally rooted, globally connected.
4. Creating an ambience for learning by digitally equipped library, smart classroom teaching, digitally equipped Seminar Halls.
5. Creating an atmosphere where students learn to intermingle with society and disseminate their knowledge in community development.
6. Promoting original researches in Tribal and Regional Languages and opening up School of Comparative Studies in the coming years.
7. Promoting an atmosphere for extension activities and taking up institutional social responsibilities.
8. Infusing entrepreneur and leadership temperament among students, making them career-oriented instead of job-oriented.
9. Promoting 100 % e-literacy consisting of syllabi promoting e-commerce literacy and e-governance basic intricacies.
10. Producing a generation next who would be professionally trained not only in soft or technical skills; rather they shall be trained in life-skills too, which in turn shall promote a spiritually sublime society full of inner happiness and creativity.
11. Making a global atmosphere where students from all corners of India and abroad shall make it a global potpourri of academic excellence.

About University

Situated on the tropic of cancer, at an altitude of 651m from sea level amidst tropical flora and fauna, Ranchi College, Ranchi (now upgraded as a Unitary State University and known as Dr. Shyama Prasad Mukherjee University, Ranchi) had been established during the Pre- Independent India. Established in 1926 as a Government Intermediate College, it marched ahead and began Under-Graduate and post-graduate Courses in various subjects of Arts/Science in the year 1946.

Even after Independence, Ranchi College continued to celebrate its recognition as Government College. Till the creation of Ranchi University, Ranchi on 12th July, 1960, it functioned as a Unit of Patna University, imparting quality Higher Education in faculties of Humanities, Science and Social Science.

And, the Growth and Expansion continued

Following the creation of Ranchi University, Ranchi on Saturday, July 12th, 1960, Ranchi College had been placed as a Unit of Ranchi University by the then Government of Bihar. Meanwhile, a new 28th state of India, Jharkhand was carved out of the Southern part of Bihar on November 15, 2000. Now the pressure was high on it. And, it took the responsibility well. Based on its performance, the UGC accorded it the status of an “Autonomous College” in 2009. Also, it had been recognized by the UGC as “College with Potential for Excellence”. This primer college of the Capital has set its mood and it never lookedback.

And, on Tuesday, April 11, 2017 Ranchi College, Ranchi scripts a history and is upgraded as Unitary University, named as **Dr. Shyama Prasad Mukherjee University, Ranchi**

MISSION

As distinct from Traditional Academic Courses, the Vocational Educational Programme i.e. B.Sc. Computer Application (Hons.), B.Sc. Information Technology (Hons.), B.Sc. Electronics (Hons.), B.Ed. Course, Amanat Survey Course, GIS, B.Sc. & M.Sc. in Environmental Science, LL.M., M.Sc. IT and Master of Computer Applicaiton Course. DSPMU Ranchi with the following Mission:

- To impart education with a view to provide not only knowledge but also skills
- To provide appropriate orientation to education for commensurate employment opportunity.
- To bring about greater linkage between general education and employment oriented education and to enable students to apply their knowledge of Theory, Techniques and Practice to achieve their personal and organizational goals.
- To impart intensive training and promote skill to increase prospects of employment.

GOALS AND OBJECTIVES

The Department of PHYSICS aims to:

- Make available opportunity for career development to provide academic instructions and practical training in the field of ELECTRONICS.
- Identify high growth sectors and set up facilities to meet future requirements of trained manpower in these sectors.
- Provide training facilities in those areas where special skills are required for efficient performance of the Job. Provide an opportunity to learn job skills in an actual work-place environment.
- Experiment with innovative teaching techniques and analyse the results in a continue effort to improve teaching standards.
- Set up a Career Guidance Service to facility career choice through information dissemination counseling and training.

DOCUMENTS TO BE SUBMITTED ALONG WITH THE APPLICATION FORM

Candidates are directed to submit photocopy of the following documents / certificates duly certified by the Competent Authority along with the Application Form & to bring all the Originals for further Verification at the time of Admission, if selected:-

1. Admit Card of Final Year Examination at Intermediate/ Higher Secondary.
2. Marks- sheet of intermediate, if passed.
3. Caste & Income Certificate (Income Certificate Validity is only for 06 (Six) Months from date of issue) ST/SC/OBC issued by Competent Authority.
- 4 Red Card for BPL Applicant.

NUMBER OF SEATS:

Number of Total Seats for the Electronics Course is 60 (Sixty). There is also Special Provision of 2 (Two) Additional Seats for BPL (Below Poverty Line) Candidates.

COURSE FEE:

Tuition Fee for **General, OBC, ST & SC Rs. 6,000/- per semester (Annually Rs12,000)** for all categories of students, the Competent Authority may enhance the Semester Fee during the Course if needed or based on the decision taken in syndicate of DSPMU.

RESERVATION:

Reservation Policy is adopted as per the Govt. of Jharkhand Directives.

GUIDELINE FOR ADMISSION:

- (i) Duration of the B. Sc. (Hons.) Electronics course is a Three Year (6 Semesters) Course.
- (ii) The Eligibility Criterion for the Admission to the Course will be minimum 45% marks in intermediate with Physics and Mathematics or Diploma with minimum 45% marks.
- (iii) Admission shall strictly be taken according to the Merit List prepared on the basis of the Centralized Entrance Test /Interview.

Syllabus and Scheme of Examination for

B.Sc. (Honours) Electronic Science

Submitted

to

***University Grants Commission
New Delhi***

under

Choice Based Credit System

June 2015

Course Structure

Details of course under B.Sc. (Honours)

Course	*Credits	
	Theory+Practical	Theory + Tutorial
<u>I. Core Course</u>		
(14Papers)	14X4=56	
Core Course Practical / Tutorial*		
(14 Papers)	14X2=28	
<u>II. Elective Course</u>		
(8Papers)		
A.1. Discipline Specific Elective	4X4=16	
(4 Papers)		
A.2. Discipline Specific Elective Practical/Tutorial*	4 X2=8	
(4 Papers)		
B.1. Generic Elective/ Interdisciplinary	4X4=16	4X5=20
(4 Papers)		
B.2. Generic Elective Practical/Tutorial*	4X2=8	4X1=4
(4 Papers)		
<ul style="list-style-type: none">• Optional Dissertation or project work in place of one Discipline Specific Elective paper (6 credits) in 6th Semester		
<u>III. Ability Enhancement Courses</u>		
1. Ability Enhancement Compulsory Courses(AECC)		
(2 Papers of 2 credit each)	2X2=4	2 X 2=4
Environmental Science		
English/MIL Communication		
2. Skill Enhancement Courses(SEC)		
(Minimum 2)	2 X2=4	2 X2=4
(2 Papers of 2 credit each)		

Total credit

140

140

* wherever there is a practical there will be no tutorial and vice-versa

Policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses as per University of Delhi rules and norms

Scheme for Choice Based Credit System
inB.Sc.(Honours) Electronic Science

	CORE COURSE (14)	Ability Enhancement Compulsory Course (AECC) (2)	Skill Enhancement Course (SEC) (2)	Elective: Discipline Specific DSE (4)	Elective: Generic (GE) (4)
I	Basic Circuit Theory and Network Analysis	(English/ MIL Communication)/ Environmental Science			GE-1
	Mathematics Foundation for Electronics				
II	Semiconductor Devices	Environmental Science/(English/ MIL Communication)			GE-2
	Applied Physics				
III	Electronic Circuits		SEC -1		GE-3
	Digital Electronics and Verilog				
	C Programming and Data Structures				
IV	Operational Amplifiers and Applications		SEC -2		GE-4
	Signals and Systems				
	Electronic Instrumentation				
V	Microprocessors and Microcontrollers			DSE-1	
	Electromagnetics			DSE -2	
VI	Communication Electronics			DSE -3	
	Photonics			DSE -4	

SEMESTER-WISE SCHEDULE FOR B.Sc. (HONOURS) ELECTRONIC SCIENCE

Semester	Course Opted	Course Name	Credits
I	Ability Enhancement Compulsory Course-I	English/MIL communications/ Environmental Science	2
	Core course-I	Basic Circuit Theory and Network Analysis	4
	Core Course-I Practical/Tutorial	Basic Circuit Theory and Network Analysis Lab	2
	Core course-II	Mathematics Foundation for Electronics	4
	Core Course-II Practical/Tutorial	Mathematics Foundation for Electronics Lab	2
	Generic Elective -1	GE-1	4/5
	Generic Elective -1 Practical/Tutorial		2/1
II	Ability Enhancement Compulsory Course-II	English/MIL communications/ Environmental Science	2
	Core course-III	Semiconductor Devices	4
	Core Course-III Practical/Tutorial	Semiconductor Devices Lab	2
	Core course-IV	Applied Physics	4
	Core Course-IV Practical/Tutorial	Applied Physics Lab	2
	Generic Elective -2	GE-2	4/5
	Generic Elective -2 Practical/Tutorial		2/1
III	Core course-V	Electronic Circuits	4
	Core Course-V Practical/Tutorial	Electronic Circuits Lab	2
	Core course-VI	Digital Electronics and VHDL	4
	Core Course-VI Practical/Tutorial	Digital Electronics and VHDL Lab	2
	Core course-VII	C Programming and Data Structures	4
	Core Course-VII Practical/Tutorial	C Programming and Data Structures Lab	2
	Skill Enhancement Course-1	SEC-1	2
	Generic Elective -3	GE-3	4/5
	Generic Elective -3 Practical/Tutorial		2/1
IV	Core course-VIII	Operational Amplifiers and Applications	4
	Core Course-VIII Practical/Tutorial	Operational Amplifiers and Applications Lab	2
	Core course-IX	Signals and Systems	4
	Core Course-IX Practical/Tutorial	Signals and Systems Lab	2
	Core course-X	Electronic Instrumentation	4
	Core Course-X Practical/Tutorial	Electronic Instrumentation Lab	2
	Skill Enhancement Course-2	SEC-2	2
	Generic Elective -4	GE-4	4/5
	Generic Elective -4 Practical/Tutorial		2/1

V	Core course-XI	Microprocessors and Microcontrollers	4
	Core Course-XI Practical/Tutorial	Microprocessors andMicrocontrollers Lab	2
	Core course-XII	Electromagnetics	4
	Core Course-XII Practical/Tutorial	Electromagnetics Lab	2
	Discipline Specific Elective-1	DSE-1	4
	Discipline Specific Elective-1 Practical/Tutorial	DSE-1 Lab	2
	Discipline Specific Elective-2	DSE-2	4
	Discipline Specific Elective-2 Practical/Tutorial	DSE-2 Lab	2
VI	Core course-XIII	Communication Electronics	4
	Core Course-XIII Practical/Tutorial	Communication Electronics Lab	2
	Core course-XIV	Photonics	4
	Core Course-XIV Practical/Tutorial	Photonics Lab	2
	Discipline Specific Elective-3	DSE-3	4
	Discipline Specific Elective-3 Practical/Tutorial	DSE-3 Lab	2
	Discipline Specific Elective-4	DSE-4	4
	Discipline Specific Elective-4 Practical/Tutorial	DSE-4 Lab	2
Total Credits			140

ELIGIBILITY FOR EXAMINATION:

1. There shall be Mid-Semester Examination in each Semester.
2. In order to appear at the Examination a Candidate shall be required to:-
 - a) Attend not less than 75% of the Total Classes of theory and Practical separately in each Semester.
 - b) Attend Tutorial Classes regularly in each paper or group.
 - c) Appear at various Departmental Examinations / Tests in Theory as well as in Practical
3. If the Student after the study for the period prescribed by the Regulations for Examination fails to fulfill the

conditions laid down in Regulation at 2 above under Eligibility for Examination, he/she shall be required to fulfil all the conditions in the subsequent academic year before being admitted to the Examination.

4. A Student must satisfy all the preconditions as mentioned above following which he/she will be permitted to appear at the Examination. However, if he/she fails in that Particular Examination, he/she will be permitted to appear at the next Examination as per the Rules and Regulations for Examination framed by the College.
5. No Student shall be admitted to the IIIrd Year / Semester V Class unless he / she passes the Ist and IInd year / Semester I, II, III & IV Examinations.
6. Duration of the Examination: The Examination in the Theory Papers shall be of Three Hours Duration and the Examination in the Practical Papers shall be of Six Hours Duration.
7. In order to pass the Examination a Candidate must have cleared the Semester Examinations as per the Rules and Regulations of Examination of the University.
8. A Candidate who passes the Examination obtaining 75% or more in any Subject in all the Six Semester Examinations taken together, shall be declared to have passed with Distinction in that Subject.
9. A Candidate who passes the Examination obtaining not less than 60% of the Total Marks in the Electronics Subject in all the Six Semesters of the University Examination taken together, shall be placed in the First Class.
10. The Candidate securing at-least 45% but less than 60% shall be placed in Second Division.

STUDENT'S ALERT

- All the students of must follow all the Rules and Regulations of the DSPMU, Ranchi
- Use of unparliamentarily Languages or loose talks will lead to punishment.
- There is a separate dress code for Students which is mandatory for all the Students.
- Ragging in any form is punishable.
- Using Mobile Phones in the Department or in the Class Room is strictly prohibited.
- Misbehavior with Faculty will lead to Rustication from the University.

STUDENT SUPPORT AND EVALUATION:

The Co-ordinator of Electronics, Under the P-G Department of Physics, DSPMU Ranchi, will constantly monitor the progress of Students. The Weak Students will be given Special Attention by the Faculty, while the Advanced Learners will be paid Additional Help and Support to do even better. For this purpose, the Faculty will take care of the following:

- Hold Weekly Seminar
- Make Personal Counseling

- Take Monthly Tests
- Take Surprise Tests
- Conduct Classes in English for Communicative Competence.
- Organize Quiz and Debates
- Persuade Students to talk in English

FACILITIES PROVIDED:

- LIBRARY
- COMPUTATIONAL ELECTRONICS LAB.
- HOSTEL
- ON-JOB TRAINING
- PLACEMENT
- INTERNET
- SPORTS AND CULTURAL ACTIVITIES

CONTACT AND ADDRESS:

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