

**INTRODUCTION****THE SAMBALPUR UNIVERSITY: A PEEP INTO THE PAST**

The Sambalpur University Act was passed by the Orissa Legislature on 10th December, 1966 to fulfil the long cherished dream of the people of Western Odisha for establishment of a University. The University started functioning from 1st January, 1967 with Prof. Parsuram Mishra as the first Vice-Chancellor. The University was inaugurated on 4th January, 1967 by Hon'ble Chancellor A.N Khosla. The University started functioning in 1967 in a rented private building at Ainthapali, Sambalpur from 1968-72. In the year 1973 the University was shifted to the present campus named Jyoti Vihar at Burla.

The territorial jurisdiction of the University covers 10 districts and part of Angul District of the state of Odisha namely Sambalpur, Sundargarh, Jharsuguda, Deogarh, Bargarh, Bolangir, Subarnapur, Nawapara, Kalahandi, Boudh and Athmallik Sub-Division of Angul District.

The University at Jyoti Vihar provides Post-Graduate education in Thirty-four subjects through Twenty-two Post-Graduate Departments. The University Post-Graduate Teaching Departments with their year of establishment in chronological order include;

(1) Political Science & Public Administration	1968
(2) Odia	1968
(3) Physics	1969
(4) Chemistry	1969
(5) Mathematics	1969
(6) School of Life Sciences	1969
(7) History	1969
(8) English	1969
(9) Economics	1971
(10) Lib. & Inf. Science	1975
(11) Statistics	1976
(12) Home Science	1976
(13) Sociology	1976/1991
(14) Anthropology	1976/1991
(15) Earth Sciences(Applied Geology)	1984

(16) Law (LL.M)	1986
(17) Business Administration	1989
(18) Environmental Science	1989
(19) Computer Science & Application (PGDCA)	1989
(20) Centre of Regional Art and Culture Studies (For Diploma in Sambalpuri Studies)	1997
(21) School of Performing Arts (Dance & Drama)	2010
(22) Hindi	2010

The University offers the following Self-financing Courses. The academic session for all self-financing courses is from 1st June to 31st May of the next year under course-cum-credit semester system with continuous evaluation.

(1) M.Sc. in Bio-Technology	2002
(2) Executive M.B.A.	2004
(3) P.G. Diploma in Development Journalism	2005
(4) Master of Finance & Control(MFC)	2006
(5) Master of Social Work (MSW)	2007
(6) M.Tech in Environmental Science and Engineering	2007
(7) M.Sc. in Applied Chemistry	2008
(8) M.Tech. in Food Science & Technology	2010
(9) M.Sc. in Food Science & Nutrition	2011
(10) M.Tech. in Geospatial Technology	2011
(11) P.G. Diploma in Food Science & Technology	2012
(12) MBA in Rural Management	2012

Besides the 34 courses cited above, the University offers M.Sc. courses in Computer Science, Bioinformatics and Electronics. It also offers an M.tech. course in Computer Science and courses in Master of Computer Application (MCA) All these aforesaid courses are run by Sambalpur University Institute of Information Technology (SUIIT), which is an autonomous constituent institute of Sambalpur University.



The University Post-Graduate Departments offer one-year study Programme for M.Phil Degree; two-year study programme for the Degrees of M. A/M. Sc/M. Tech/LL. M/Business Administration/M.Lib. & Info. Science; one-year P.G. Diploma Courses in Computer Science & Application, Sambalpuri Studies, Translation Studies and three-year course in Executive M.B.A.

The following Schools of Studies have been created since the session 2008-09;

- (1) School of Bio-social Studies comprising Sociology, Anthropology & Home Science Departments.
- (2) School of Mathematics, Statistics & Computer Science comprising Mathematics, Statistics & Computer Science Departments.
- (3) School of Life Sciences comprising Life Science & Bio-Technology courses.
- (4) School of Letters comprising Departments of English, Odia & Hindi.
- (5) School of Physics comprising Physics & Nuclear Physics courses.
- (6) School of Chemistry comprising Chemistry & Applied Chemistry courses.
- (7) School of Social Science comprising Economics, History and Political Science & Public Administration Departments.

Autonomous status has been conferred upon the P.G. Departments of Chemistry, Life Sciences, History, Economics, English, Environmental Science, Mathematics, Statistics and Physics.

There are 08 Post-Graduate Hostels in the University Campus out of which 03 are Ladies Hostels and 05 are Gents Hostels. The University provides several facilities to the boarders in the Hostels like Common Room with T.V, Reading Room with Newspapers and Magazines, Guest Room, First Aid, STD Telephone Booth, Computer with Internet facilities etc. The Central Canteen has been opened near the Hostel Campus for the benefit of students. Besides there are 02 Nationalized Banks, 02 ATM Counter, 01 Post-Office, 01 Health Centre, 01 Auditorium, 01 Police-Out Post, 01 Faculty House and 01 Community Centre in the University Campus for providing services to students/teachers and employees in the Campus.

The establishment of Directorate of Distance and Continuing Education (DDCE), Private Examination Cell (PEC), Nodal Computer Centre, UGC Academic Staff College, Gymnasium, and Professor Bhubaneswar Behera Central Library are added features of Sambalpur University.

Join Hands to make your Campus Ragging Free



1. ELIGIBILITY FOR ADMISSION-

Specific eligibility conditions are reflected under each course.

Candidates, who have appeared at the qualifying examinations and the results thereof awaited are also eligible to apply. However, they have to submit the Provisional Certificate and Marksheet of the qualifying examination within ten days after publication of results of Sambalpur University, or on any date during the Entrance Test schedule i.e. from **25.06.2014 to 05.07.2014** whichever is later, otherwise their cases for selection shall not be considered.

2. ONLINE ADMISSION

A. The University has introduced online filling up of application form. The last date of submission of application online is 14.06.2014 till 5:00 P.M.

- (i) Candidates should logon to the website **<http://www.suniv.ac.in>** and click "online admission" or **<http://eadmission.suniv.ac.in>**
- (ii) The candidates should download the Prospectus for P.G. Self-financing Courses, 2014-15 and read it carefully before filling up of form online.
- (iii) The candidates should download the Challan Form and deposit Rs.500/- in any branch of State Bank of India towards processing fee. The bank will provide a Journal No. against the deposit.
- (iv) The candidates should then register himself/herself (through the appropriate link) by providing the following information;
 - (a) Name of the course
 - (b) Name of the candidate
 - (c) email ID
 - (d) Journal No. (provided by the Bank)
 - (e) Name of the Bank
 - (f) Password (to be created by the candidate)

The information as above are vital and the candidate should carefully notedown those for future use.

- (v) The candidates can then fillup the form online. After completion of all the fields in the form, the candidates should click the "submit" button. Thereafter a page will open with all the information of the candidate that he/she has filled in. The candidates then has to take a printout of this page and send/submit it to the **Course Coordinator of respective Self-financing Course, Sambalpur University, Jyoti Vihar-768019, Sambalpur (ODISHA)** along with the following documents latest by **18.06.2014**.
 - (a) Two recent passport size colour photographs of the candidate duly attested by a Gazetted Officer.
 - (b) Attested copies of the Mark sheets and Certificates of all examinations starting from H.S.C for determining eligibility.
 - (c) University copy of Bank Challan of Rs.500/- in original towards payment of processing fee.
 - (d) An attested copy of the certificate from CDMO regarding his/her disability for 50% or more (in case of Physically Handicapped Candidates).
 - (e) An attested copy of the Caste Certificate obtained from a Revenue Officer not below the rank of a Deputy Collector or MLA or MP or DWO, in absence of which the candidate will not be eligible to get concession allowed under reserved categories.
 - (f) The undertaking form(s) should be duly filled in and signed by the applicant and his/her father or natural guardian.

The envelope containing the application complete in all respect must be superscribed "Application for Admission in _____ (Subject) _____ Self-financing Course" Sambalpur University.



(h) Application incomplete in any manner shall be rejected.

B. Procedure for downloading the Admit Card

Admit Card will available on the web for eligible candidates from **20.06.2014** onwards. Candidates should login and download the same.

3. ENTRANCE EXAMINATION

Written Test for admission shall not be conducted where the number of applicants are less than the sanctioned strength. In that case only Viva-Voce shall be conducted.

PROGRAMME FOR ENTRANCE EXAMINATION - 2014

Date	9:00 A.M. to 11:00 A.M. (1 st sitting)	11:30 A.M. to 1:30 P.M. (2 nd sitting)	2:00 P.M. to 4:00 P.M. (3 rd sitting)
25.06.2014 (Wednesday)	M.Sc. in Applied Chemistry	-	-
02.07.2014 (Wednesday)	M.Tech. in Environmental Science & Engineering	P.G. Diploma in Development Journalism	P.G. Diploma in Food Science & Technology
03.07.2014 (Thursday)	Master of Finance & Control	M.Sc. Biotechnology	M.Tech. in Geospatial Technology
04.07.2014 (Friday)	Master of Social Work	M.Sc. in Food Science & Nutrition	M.A. in Rural Management
05.07.2014 (Saturday)	M.Tech. in Food Science & Technology	-	Executive MBA

NB: The date and time for Viva-Voce Test will be announced during the Entrance Test.

IMPORTANT DATES:

• Filling up of Application form for online admission	From 15.04.2014
• Last date of online submission of application	14.06.2014 upto 5:00 P.M.
• Last date of submission of hard copy of application	18.06.2014
• Downloading of Admit Cards for Entrance Test	20.06.2014 and onwards

**4. SELECTION FOR ADMISSION:**

Selection will be based on career (30 marks), written (60 marks) and Viva-Voce (10 marks). Specific criteria for some courses have been prescribed later under the course features. While calculating career mark, weightage shall be given to candidates for having secured Honours in the concerned subject only. Honours in other subjects shall be put at par with Pass weightage.

Formula for calculating career marks (out of 30) admission shall be as follows:

Degree	1st Dvn	2nd Dvn	3rd Dvn	
H.S.C.E.	6.0	4.5	3.0	
+2	9.0	7.0	5.0	
+3 (Hons)	13	10	-	Distn:-2
+3 (Pass)	7			Distn:-2

N.B. In cases where no division, marks or percentage of marks have been awarded, the division shall be determined on the basis of proportionate marking from the grades awarded for the purpose of career marking

5. INTIMATION

Intimation to the selected candidates will be sent by Registered Post / Speed Post and will be notified in Departmental Notice Boards.

- (v) Two attested passport size colour photographs
- (vi) Original Income Certificate (In respect of female candidates claiming concession in tuition fee).
- (vii) Original Caste Certificate for SC/ST candidates.
- (viii) Required fees specified in the Intimation Letter.

6. DOCUMENTS REQUIRED FOR ADMISSION

A. Admission to different Self-financing Course will be made by post and not in person. The selected candidates must send the following documents by Registered Post for admission to the Course Coordinators of the concerned Self-financing Courses.

- (i) College Leaving Certificate in original from the Institution last attended;
- (ii) Conduct Certificate in original from the Institution last attended;
- (iii) Original Mark Sheet/Certificates of all examinations starting from H.S.C.E. to last qualifying examination.

(In case of +3 Examination, Mark sheet of First Examination and Final Examination are to be submitted separately, if detailed marks are not provided in the final mark sheet).

- (iv) Migration Certificate in original for candidate from other University.

B. No admission shall be made into any Self-financing Course beyond 13.08.2014

7. ALLOTMENT OF SPECIAL PAPER:

The number of special papers to be offered by a P.G. Department shall be decided by the Teachers' Council of the concerned Department and notified by the Head of the Department before the allotment of special papers, preferably at the time of calling for application from students for such allotment. As far as possible, the number of special papers offered by a Department shall be equally divided among the applicants on the principle of preference and consolidated merit list basing on performance in the written test and viva-voce plus career mark, notwithstanding different categories of reservations.



8. RESERVATION

- (i) Twelve and eight percent of seats in each course are reserved for candidates belonging to Scheduled Tribes and Scheduled Castes respectively. However, the unfilled seats reserved for ST candidates will be filled up by admitting SC candidates and vice-versa. No, admission will be made beyond the sanctioned strength in Self-financing Courses.
- (ii) One seat in each department will be reserved for Physically Handicapped candidates. Such candidate is required to produce a certificate from the C.D.M.O. regarding his/her disability for 50% or above. On the basis of the certificate issued by the C.D.M.O. concerned admission under PH category may be considered by the respective Head of the Department / Course Coordinator.
- (iii) Concessions for the wards of Kashmiri migrants for admission shall be allowed as per the directive of the MHRD, Govt. of India.

9. REQUIREMENT OF ATTENDANCE

A candidate shall be required to attend 75% of lectures, tutorials and practical classes offered during the year. Condoning of attendance may be granted by the Syndicate only to the extent of 15% in exceptional cases. When a candidates has been deputed by College/University to represent the College/University/ State for any activity, the lectures delivered during his/her absence shall not be counted towards the calculation of percentage of attendance, provided the HOD/Course Coordinator certifies to that effect.

10. CONDUCT OF EXAMINATION

Examinations of Self-financing courses will ordinarily be held as per the University Act, Statutes and Regulations.

11. FEES AND SUBSCRIPTION

The following fee are payable at the time of admission in addition to the Course fee and other requisite fee prescribed for each Course.

- (i) Tuition fee for Post-Graduate SF Courses in Humanities per annum Rs.144.00
- (ii) Tuition fee for Post-Graduate SF Courses in Science per annum Rs.168.00
- (iii) a. University Registration Rs.50.00
b. Enrolment Fee Rs.50.00
(For New entrants to Sambalpur University)
- (iv) Recognition fee for students who passed examination from other Universities recognized by the Academic Council of Sambalpur University as equivalent to corresponding examination of the University Rs.25.00
- (v) Library fee and registration Rs.100.00
- (vi) Student Aid Fund Rs.5.00
- (vii) Magazine Fee Rs.50.00
- (viii) Games Fee(Athletic Club) Rs.50.00
- (ix) Medical Fee Rs.5.00
- (x) Cultural Society Fee Rs.50.00
- (xi) Science Society Fee Rs.20.00
(Science Students only)
- (xii) Common Cultural Fund Rs.10.00
- (xiii) Students Welfare Fund Rs.10.00
- (xiv) Students' Union Subscription Rs.50.00
- (xv) D.S.A Fee (Only for Day Scholar Students) Rs.10.00
- (xvi) Fee for Wall Magazine Rs.5.00
- (xvii) Fee for Pioneer Rs.5.00
- (xviii) Fee for Sports Rs.20.00
- (xix) Fee for Horizon Rs.5.00
- (xx) Alumni Index Rs.100.00
- (xxi) Admission Fee - Equal to One Month Tuition Fee (for new entrants to a course)
- (xxii) Fee for Insurance(Students Safety Insurance Scheme approved by Syndicate) Rs.15.00
- (xxiii) One time Bus Fee from each student at the time of admission Rs.75.00
- (xxiv) Advance Bus Fare per Annum for Day Scholars residing at Sambalpur and expected to come by University bus Rs.3600.00



Note:

1. The Candidate can seek refund of proportionate amount of bus fare after becoming a boarder.
2. Bus fare for a full Academic session will be realized at the time of admission.

(xxv) Energy charges for boarders for two years Rs.1800.00

(xxvi) Water Charges for boarders for two years Rs.240.00

(xxvii) N.C.C. Rs. 5.00

(xxviii) Red Cross Rs.10.00

(xxix) Social Service Rs. 5.00

(xxx) One Time Caution Money Rs.1,000.00

(Caution money is refundable after completion of course. If the said amount is not claimed within three years from the date of completion of course the claim for the said amount shall automatically stand forfeited).

Scholarship, stipend, refund, etc. due to be paid to any bonafide student of the University will be paid by order cheque only. The students are therefore, advised to open one Saving Bank Account in the Bank functioning on the Campus of Jyoti Vihar immediately after admission into any course of the University.

(xxxi) The following fees are to be collected from the candidates by the respective Course Coordinator of the Self-financing course at the time of admission.

(a) Laboratory deposit for each laboratory based Department Rs.100.00

(refundable at the end of the course less cost of breakage)

(b) Fee for Maintenance of Abstract of Attendance Rs. 2.00

(c) Fee for Identity Card Rs. 5.00

(d) Fee for Seminar Library Rs. 5.00

(e) Fee for Cultural Activities Rs. 20.00

(f) Candidates of all categories for admission to the Self-financing courses are to pay Development fee of Rs.2,500/- per semester

(g) Departments conducting field trip or study tour as a part of their curriculum shall bear the expenditures out of contributions levied on students and the appropriate fees shall be collected from the students as decided by the Teachers Council of the respective Department at the time of admission and / or renewal of admission.

(h) Candidates for admission to the Arts and Social Science Departments without laboratory are to pay Rs.1000/- and to science Departments and other Departments with laboratory are to pay Rs.1500/- as Infrastructure Development Fund fee.

(i) Student Seminar fee per semester (to be spent by the students) Rs.1000.00

(j) A student shall pay the following examination and examination related fees as prescribed in common guidelines of self-financing courses.

(a) Examination fee/Semester Rs.500/-

(b) Centre Charge/Semester Rs.100/-

(c) Late deposit of Examination fee within 15 days of last date of form fill up. Rs.100/-

(d) Fee for issue of Grade Sheet after for each Semester. Rs. 50/-

(e) Fee for issue of provisional certificate cum grade sheet Rs.100/-

(f) Re-addition Fee/Paper Rs. 50/-

(g) Examination fee for Repeat/Improvement per theory paper Rs.250/-

(h) Original diploma (after successful completion of 4th Semester exam.(as per University rule)

The autonomous Departments shall collect the fees from the students before each Semester examination. For non - autonomous Departments, the examination related fees shall be deposited by the students in the Central Office at the time of form fill up before each Semester examination.



12. HOSTEL ADMISSION RULES AND RELATED MATTERS

(i) Hostel accommodation may be provided to students of P.G Programme depending upon availability of seats in the following hostels.

(a) Brahmaputra, Mahanadi, Bhagirathi and Satadru Hostels are for Gents Students

(b) Narmada, Silver Jubilee and Pravabati Devi Ladies Hostels and temporary M.Phil. Hostels are for female students only.

(ii) **RESERVATION**

Reservation in various Hostels for SC and ST candidates is as per Rules, i.e., SC-8% and ST-12%

(iii) **ADMISSION**

(a) Students seeking admission in to the Hostels shall have to apply with two passport size recent colour photographs in the prescribed form available in the P.G. Departments duly forwarded by the Course Coordinator of Self-financing course. The Course Coordinator of Self-financing course will forward the merit list of the prospective boarders to the Warden as soon as the merit list of admission of students in the Department concerned is prepared.

(b) The students will get an Intimation letter from the Warden for admission in the Hostel wherever required.

(c) The date of admission in the Hostels during the session will be notified by the Warden.

(d) **The admission for the hostel is for one academic-session i.e., June to May only.**

(e) The selected boarders shall have to take admission through the P.G. Central Office by paying the following fee for the session at the Cash Counter, P.G. Central Office.

(f) **(1) SEAT RENT(Except Mahodadhi)**

(i) Single Seated Room Rs.168/- per annum

(ii) Multiple Seated Room Rs.120/- per annum

(2)SEAT RENT (Mahodadhi Hostel)

(i) Single Seated Room Rs.800/- per annum

(ii) Double Seated Room Rs.400/- per annum

These items and charges are subject to change from time to time. If any boarder can not take admission within the due time, the period of admission can be extended by the Warden, P.G. Hostels once without fine. A fine will be levied for subsequent extensions.

(g) On submission of the receipt of deposit of fee made in the P.G. Central Office in the respective hostel, the Superintendent shall collect the required prescribed charges of Hostel and allot seat/room in the Hostel. The boarder shall be provided with furniture and other materials for his/her seat/room for the hostel from the resources available.

The fees to be deposited in the hostel are as follows:

- (i) Establishment fee Rs.1000/- per annum
- (ii) Cultural fee Rs.300/- per annum (This may increase if a hostel so decides)
- (iii) Hostel Caution Money - Rs.100/-
- (iv) Hostel Security fee (non-refundable) Rs.200/- per annum.

(iv) Mess charges to be decided by the Hostels. The charges are subject to change from time to time. A portion of the Hostel and Mess caution money will be deducted at the time of refund. The amount to be deducted shall be decided by the Hostel Residence Committee If the caution money is not claimed within 3 years from the date of leaving the hostel, the claim for the said amount shall automatically stand forfeited.

If the students of Third Semester or 2nd Year do not deposit their annual fees like establishment, cultural etc. in the hostel office by the end of August, a late fine @ Rs.5/- per day shall be levied maximum upto one month. Otherwise allotment for admission shall be cancelled.

(h) Research Scholars on completion of their tenure of Fellowship may be allowed to stay in the hostel for only one month on payment of usual charges.

(i) **MESS:** The boarder shall have to be guided by the Mess Rules to be framed by each hostel.



- (j) **DISCIPLINE:** Boarders are expected to maintain discipline and proper atmosphere of studies in the hostels.
The following acts of indiscipline are strictly prohibited:
1. All kinds of shouting, violence, knocking or /and any other act of undesirable behaviour that is likely to cause disturbance or annoyance to others.
 2. Ragging of all kinds in the hostel or in the University Departments and within or outside the Campus.
 3. Any form of playing music and video system inside the room or the hostel premises causing annoyance and disturbance to others.
 4. Maltreating or abusing the hostel employees, mess canteen staff and others.
 5. Any meeting not relating to hostel affairs held on the hostel premises without prior permission.
 6. Keeping fire arms, weapons and intoxicants of any kind in the hostels.
 7. Cooking in the room of the hostels.
 8. The use of electric heaters, emersion heater, radio, TV and other similar electrical appliances in the room.
 9. Keeping the light and fan on when boarders are not inside the rooms.
 10. Damaging, misusing and stealing of any hostel property or stealing others belongings.
 11. Entertaining female visitor into the room of the boarders in the boys hostels and male visitor into the rooms of the women hostels.
 12. Boarders staying outside overnight without permission of the competent authority.
 13. Overstaying in Hostels by the boarders without permission of competent authority.
 14. Entertaining guest/outsideers in the hostel without written permission of the respective Hostel Superintendent.
 15. Leaving Jyoti Vihar without intimating the hostel authority in writing and without taking prior permission.
- (k) **FINAL CLEARANCE**
- (i) After the completion of theory and practical examinations the boarders shall have to handover the furniture and other materials issued to him/her along with the room key to the hostel authorities within a week.
 - (ii) The boarder can then claim a final clearance certificate in the prescribed format from the hostel office and submit the same to the respective H.O.D. / Course Coordinator.
 - (iii) There shall be a Hostel Residence Committee (HRC) with Warden, P.G Hostels as the Chairman and all Superintendents and Assistant Superintendents as its members. The Hostel Residence Committee shall look into general administration of the Hostels.
- 13. PENALTY & PUNISHMENT TO THE STUDENTS INDULGING IN RAGGING INSIDE THE UNIVERSITY / DEPARTMENT / HOSTEL PREMISES.**
- (i) As per Supreme Court order communicated to University by the University Grants Commission, New Delhi, ragging in any form is strictly prohibited. If any incident of ragging comes to the notice of the authority the accused student will be given an opportunity to explain, and if his/her explanation is not satisfactory, the authority would expel him/her from the institution as well as hostel if he/she is a boarder.
- While admitting the students each H.O.D./ Course Coordinator shall ensure the submission of an undertaking in the format prescribed in the admission application form signed by both the candidate and his parents (or legal guardian).
- 14. INTERPRETATION**
- For any interpretation in respect of the provisions of the Prospectus, the decision of the University shall be treated as final.



**ADDITIONAL INFORMATION FOR
ADMISSION TO
SELF – FINANCING COURSES IN
P.G. DEPARTMENTS
2014-15**



1. M.Sc. IN BIOTECHNOLOGY IN THE SCHOOL OF LIFE SCIENCES(AUTONOMOUS)

Name of the Course Coordinator: **Dr. A.K. Patel** Mobile No. **9338686900**

1. ELIGIBILITY CRITERIA: Any Science graduate including Engineering & Medical or other Professional courses

2. SELECTION CRITERIA: As per general selection criteria.

3. DURATION OF THE COURSE: 2 YEARS

4. NUMBER OF SEATS: 16 (Sixteen)

5. FEE STRUCTURE:

Course Fee: **Rs. 25,000/- per semester** (Besides the course fee, a candidate admitted to the programme shall pay other fees as prescribed in the prospectus at Clause. 12).

6. COURSE STRUCTURE:

Course	Course Title	Credit hours	Marks
FIRST SEMESTER			
BT-411	(A) Fundamentals of Physical Sciences	3 CH	50
(A or B)	(B) Fundamentals of Biological Sciences		
BT-412	Biochemistry	3 CH	50
BT -413	Biophysics and Biophysical Chemistry	3 CH	50
BT -414	Microbiology	3 CH	50
BT -415	Molecular Biology	3 CH	50
BT -416	Instrumentation and Techniques	3 CH	50
BT -417	Practical (Biochemistry and Instrumentation)	2 CH	50
BT -418	Practical (Microbiology)	2 CH	50
Course	Course Title	Credit hours	
SECOND SEMESTER			
BT -421	Cell and Developmental Biology	3 CH	50
BT -422	Industrial Microbiology	3 CH	50
BT -423	Immunology and Immunotechnology	3 CH	50
BT -424	Genetics	3 CH	50
BT -425	Taxonomy, Biodiversity & Biostatistics	3 CH	50
BT -426	Recombinant DNA Technology	3 CH	50
BT -427	Practical (Cell biology, Genetics and Biostatistics)	2 CH	50
BT -428	Practical (Immunology and Recombinant DNA Technology)	2 CH	50



Course	Course Title	Credit hours	Marks
THIRD SEMESTER			
BT -531	Bioinformatics & Computer Applications	3 CH	50
BT -532	Bioprocess Engineering and Technology	3 CH	50
BT -533	Genomics, Proteomics and Metabolomics	3 CH	50
BT -534	Protein Engineering and Enzyme Technology	3 CH	50
BT -535	Medical and Pharmaceutical Biotechnology	3 CH	50
BT -536 (A or B or C)	(A) Plant Biotechnology	3 CH	50
	(B) Animal Biotechnology		
	(C) Environmental Biotechnology		
BT -537	Practical (Bioprocess Engineering and Enzyme Technology)	2 CH	50
BT -538	Practical (Elective Papers and Bioinformatics)	2 CH	50
Course	Course Title	Credit hours	
FOURTH SEMESTER			
BT -541	IPRs in Biotechnology, Biosafety and Bioethics	3 CH	50
BT -542	Seminar	3 CH	50
BT-543	Institutional & Industrial Study Tour and Viva	3 CH	50
BT -544	Project Work and Viva Voce	(12+ 3) CH	250
TOTAL COURSE CREDIT		90 CH	1600

7. COURSE FACULTY:

(A) Core Faculty:

Sl. No.	Name of The Teacher	Area of Specialization
1.	Dr. (Mrs) B. Nayak	Cyanobacterial Technology
2.	Dr. E. Kariali Course Coordinator	Stress Physiology and Agricultural Biotechnology
3.	Dr. J. Panigrahi	Molecular Biology, Plant Genome mapping, Genetic Engineering
4.	Dr. R. K. Behera	Biochemistry and Immunology
5.	Dr. S. P. Mishra	Forest Ecology and Plant Tissue Culture
6.	Dr. (Mrs.) S. Sahoo	Soil Biotechnology
7.	Dr. J. Rath	Animal Cell Culture & Immunotechnology
8.	Dr. A.K. Patel	Microbial Technology and Process Engineering
9.	Dr. S. Pattanaik	Microbiology and Pharmaceutical Biotechnology
10.	Dr. A. Patnaik	Environmental Biology

**(B) Guest Faculty:**

Guest Faculties from other Universities, Research Institutes across India having expertise in different fields of Biotechnology are invited to impart quality teaching at par.

8. OTHER SPECIAL FEATURES OF THE COURSE AND THE HOST DEPARTMENT:**(a) Special Feature of the Course:**

Biotechnology in the present context is an interdisciplinary, applied and job oriented discipline. It caters to the ever increasing demand for skilled and trained manpower for industries, R &D institutes and for solving specific problems of a developing country like India. Being a front line course the syllabus of the course has designed to amalgamate various features of physical, chemical and biological sciences. The aim is to impart high standard teaching in molecular aspects of biological systems and to expose students to recent developments in the field of medicine and biology. The course is meant to confer the students a systematic understanding of biological processes from physical science as well as chemical sciences point of view. Further the course content allows the students to learn various laboratory techniques as per the requirement of biotech industries. This background of learning allows the students to be focused, interpretive and pragmatic to meet the challenges of science in 21st century.

(b) About the host Department:

The School of Life Sciences, Sambalpur University initiated teaching Biotechnology in 1989 as full length paper in M.Sc Life Sciences curriculum. It is being taught along with other core areas of biology for the last 21 years with existing faculty members and infrastructure facilities. During these years this school has trained some 400 students in basic biotechnology. Many of these students have utilized their training in biotechnology to enter into various research institutes in India and abroad, and are doing excellent research in various fields of biotechnology. Some of them have joined industries catering to Biotechnology. It has been made possible by the dedicated and talented faculty of the school who have been endeavouring to promote the subject. More than 100 biotechnology oriented research papers and several books has published from the school.

(c) Infrastructure facilities available in the department:

The department has state of the art laboratories for (i) Biochemistry, (ii) Molecular Biology and Genetic Engineering, (iii) Plant Biotechnology and Genetic Transformation, (iv) Microbiology and Immunology, (v) Bioinformatics, (vi) Cytogenetics, (vi) Ecology and Environmental biotechnology and (vii) Central Bioinstrumentation facilities.

(d) Major Equipments available in the department:

All the labs are well equipped with desired instruments and facilities. In addition to the central instrumentation facility possessed with sophisticated instruments viz. PCR Machine, Gradient Thermal cycler, Gel Documentation System, Bioreactors of various design, UV-Vis spectrophotometer, ELISA reader, DNA Sequencing system, Blotting apparatus, Vertical and Submarine Electrophoresis apparatus, Lyophilizer, Ultracentrifuge, Millipore Water Purification Systems, Sterizomic Microscope, Phase contrast Microscope, Fluorescence Microscope, High Performance Liquid Chromatography, Gas Chromatography and Atomic Absorption Spectrophotometer, Infrared gas analyzer, Photosynthetic Efficiency Analyser. Further, this facility will be enriched with Gene gun, Electroporation system, Real time PCR machine, CO₂ Incubator, Animal Tissue culture lab, Transgenic house, NET house through DST –FIST programme.



2. EXECUTIVE MBA PROGRAMME IN THE P.G . DEPARTMENT OF BUSINESS ADMINISTRATION

Name of the Course Coordinator : Prof. A.K. Dasmohapatra Mob. No.9437158107

1. ELIGIBILITY CRITERIA:

“Any Graduate who has worked or is working after graduation for atleast two-years in a managerial/ supervisory cadre as is evident from the testimonials issued by his/her employer or the designated officer for the purpose in an organization of repute.

All Government and Semi Government organizations, autonomous bodies, Registered Societies and firms including corporate units in the private and public sector duly incorporated, private and public sector banks and financial institutions, colleges, universities and other research and educational institutions shall be considered as institutes of repute.

Entrepreneurs and self-employed persons with own ~SSIs, valid license, TIN, PAN etc. with annual sales turnover of Rs.50 lakhs or more and professionals, such as Doctors, Engineers, Chartered Accountants, Cost Accountants, Company Secretaries, Legal Practioners will also be considered for admission.

Candidates on job, seeking admission to the programme, will have to produce NOC from their respective organizations.

2. SELECTION CRITERIA:

Career:30 Written Test:30 Interview:10 Experience:30

EXPERIENCE:

3 marks shall be given for each completed year of experience subject to a maximum of 30 marks i.e 3 marks per year for a maximum of 10 years.

Formula for calculating career marks (out of 30) will be as per the general selection criteria except for +3 which will be as follows:

$$\text{Marks Secured in \%} = \frac{\text{Total Marks secured}}{\text{Maximum Marks}} \times 100$$

<u>Percentage of Marks</u>	<u>Weightage</u>
75% or above	15
60% or above but less than 75%	12
45% or above but less than 60%	10
All other eligible candidates	08

3. DURATION OF THE COURSE: 3 YEARS

4. NUMBER OF SEATS: 40 (minimum number to run the programme 20)

5. FEE STRUCTURE:

a) Course Fee : Rs.10,000/- per Semester payable in the beginning of each semester.

b) Other fee: Admission fee, Examination fee and Development fee etc. as per Clause 12 of Prospectus.



6. COURSE STRUCTURE:

1 st Semester		Marks
E-E-101	Management process and Organisation Behaviour	100
E-102	Human Resource Management	100
E-103	Financial Accounting for Managers	100
E-104	Quantitative Methods for Managers	100
E-105	Marketing Management	100

2nd Semester		Marks
E-201	Managerial Economics	100
E-202	Financial Management	100
E-203	Strategic Cost & Management Accounting	100
E-204	Indian Ethos & Values	100
E-205	Management Science	50

3rd Semester		Marks
E-301	Research Methodology	100
E-302	Computers for Management	100
E-303	Three Elective Specialization Papers from Groups of E-303 to E-305	100
E-304		
E-305		

4 th Semester		Marks
E-401	Business Environment	100
E-402	Production Management	100
E-403	Three Elective Specialization Papers from Groups of E-403 to E-405	100
E-404		
E-405		

5 th Semester		Marks
E-501	Business Policy	100
E-502	Business Legislation	100
E-503	Three Elective Specialization Papers from Groups of E-503 to E-505	100
E-504		
E-505		

6 th Semester		Marks
E-601	Management Information System	100
E-602	Strategic Management	100
E-603	Corporate Governance	100
E-604	Dissertation (Equivalent to two Papers)	200

SPECIALIZATION OFFERED

Floating of an area of specialization will be the exclusive prerogative of the department and the mere mentioning of the areas of specialization in the prospectus does not entitle a candidate the right to press for the opening of an area of specialization of his/her own choice.

ELECTIVE SPECIALISATION PAPERS: All Papers carry 100 Marks each.

Finance

- E-303FIN Security Analysis and Portfolio Management
- E-304FIN Project Planning and Appraisal Method
- E-305FIN Working Capital Management
- E403FIN Management Control System
- E-404FIN Corporate Taxation
- E-405FIN Corporate Restructuring
- E-503FIN Financial Derivatives
- E-504FIN international Accounting
- E-505FIN international Finance

Human Resource Management

- E-303 HRM Industrial Relation
- E-304 HRM Manpower Training and Development
- E-305 HRM Human Resource Development Strategies and System
- E-403 HRM Manpower Development for Technological Change
- E-404 HRM Compensation Management
- E-405 HRM Managing Interpersonal and Group Processes
- E-503 HRM Counseling skills for Managers
- E-504 HRM Cross Culture and Global Management
- E-505 HRM Legal Framework Governing Human Relation

Production

- E-303 PRO Total Quality Management
- E-304 PRO Production Planning and Control
- E-305 PRO Logistic Management -
- E-403 PRO Purchasing and Material Management
- E-404 PRO Applied Operation Research
- E-405 PRO Transportation Management
- E-503 PRO Goal Programming in Management
- E-504 PRO Service Operation Management
- E-505 PRO World Call Manufacturing

System

- E-303 SYS' Derision Support System
- E-304 SYS Business Process Reengineering
- E-3Q5 SY5 System Analysis and Design
- E-403 SYS Database Management

Planning

- E-405 SYS IT Application for Business
- E-503 SYS Security and Control Information System Dissemination
- E-504 SYS Software Engineering Management
- E-505 SYS E-Business

Marketing

- E-303-MAR Consumer Behaviour
- E-304-MAR Advertising Management
- E-305-MAR Sales and Distribution Management



E-403-MAR Strategic Management

E404-MAR Marketing of Services

E-405-MAR Retail Management

E-503-MAR International Marketing

E-504-MAR Brand Management

E-505-MAR Marketing Research

Rural Management

E-303 RUR Corporative Management

E-304 RUR Rural Credit Finance

E-305 RUR Rural Resource and Development

E4Q3 RUR Rural Industrialization

E-404 RUR Participatory Development in Rural Areas

E405 RUR Rural Marketing

E-503 RUR Waste Land Management

E-504 RUR Urban Development and Regional Planning

E-505 RUR Urbanization in India

Small Business and Entrepreneurship Management

E-303 SBE Government Business Interface

E-304 SBE Small Business Marketing

E-305 SBE Financing of Small Business

E-403 SBE New Enterprises Management

E-404 SBE Entrepreneurial Development

E-405 SBE Small Business Environment and Management

E-503 SBE Innovation and Small Business Management

E-504 SBE Small Business Investment and Management

E-505 SBE Small Business & Export Management

Health Care Administration

E-303 HCA Organization and Management of Hospital

E-304 HCA Health Care and Social Policy

E-305 HCA Health System Management

E-403 HCA Health Care Economics and Finance

E-404 HCA Environmental Health Management and Safety

E-405 HCA Health and Hospital Information System

E-503 HCA Health Communication: Development and

E-504 HCA Community Health, Epidemiology & Population

E-505 HCA Support and Utility Services and Risk Management

7. COURSE FACULTY :

1. Prof. (Mrs.) P.Gahan
2. Prof. B.Satpathy
3. Prof. A.K.Das Mohapatra
4. Dr. P.C. Tripathy
5. Dr. T.K. Das
6. Mr. S. Kerketta
7. Dr. D.K. Mahalik
8. Dr. A. Chand
9. Prof. R.P. Das
10. Prof. D.V. Ramana
11. Prof. P.N. Panda
12. Prof. S.S. Rath
13. Mr. P. Dandsana
14. Dr. K. Pradhan
15. Dr. . S. Sahu
16. Mr. N.K. Ojha
17. Mr. D. Chhatopadhyaya
18. Mr. O.P. Mishra
19. Prof. S.P. Mishra
20. Prof. A.K. Sribastab
21. Mr. J. Patjoshi
22. Prof. S. Teki

Guest faculties will also be invited.

8. OTHER SPECIAL FEATURES OF THE COURSE AND HOST DEPARTMENT:

The course has been designed to develop Executive by equipping them with managerial tools and techniques so as to make them capable of shouldering higher responsibility and contributing to the organizational growth.

The Department is equipped with highly qualified and experienced faculty with adequate modern infrastructure.

*Join Hands to make your Campus
Ragging Free*



3. MASTER OF FINANCE AND CONTROL (MFC)

(EQUIVALENT TO THE DEGREE OF MASTER IN BUSINESS ADMINISTRATION WITH SPECIALISATION IN FINANCE)

P.G. DEPARTMENT OF ECONOMICS (AUTONOMOUS)

Name of the Course Coordinator : Prof. S.S. Rath Mob. No.9437126614

1. **ELIGIBILITY CRITERIA** : At least 2nd Class Hons. in B.A/B.Sc./B.Com or Pass Student with 45% in aggregate.

2. **SELECTION CRITERIA** : As per general selection criteria.

3. **DURATION OF THE COURSE**: 2 YEARS

4. **NUMBER OF SEATS** : 32 + 4 sponsored seats (minimum number required to run -20)

5. **FEE STRUCTURE** : Course fee Rs.15,000/- Per Semester in addition to fee prescribed at Clause-12 of the Prospectus.

6. **COURSE STRUCTURE** :

1 ST Semester	Credits
Managerial Concepts & Organisational Behaviour	3
Business Environment	3
Managerial Economics	3
Statistical Analysis	3
Financial & Cost Accounting	3
Marketing Management	2
Financial Management	2
Total	23

2 nd Semester	Credits
Accounting for Managerial Decisions	3
Computer Application and Business	3
Financial Institution & Market	3
Corporate Legal Framework	3
Investment Management	4
Security Market Operation	3
Research Methodology and Business Communication	3
Total	22

3 rd Semester	Credits
Operational Research	3
Financial Services Marketing	3
International Finance	4
Portfolio Management	3
E-Commerce	3
Corporate Tax Planning & Management	3
Training Report & Presentation	3
Total	22

4 th Semester	Credits
Strategic Management	3
Strategic Financial Management	3
Insurance Management	3
Management Information System	3
Multinational Financial Management	3
Derivatives and Risk Management	3
Project Report and Viva-Voce	5
Total	23

7. **COURSE FACULTY** : Core & Guest Faculty

Economics :

- 1. Dr. P.K. Tripathy, Professor
- 2. Dr. S.S. Rath Professor
- 3. Sri B. Mishra Reader

Dept. of Business Administration

- 1. Dr. A.K. Das Mohapatra Professor
- 2. Dr. P.C. Tripathy Reader

Dept. of Law

- 1. Sri. J. Patjoshi Reader

U.C.E., Burla

- 1. Dr. Debadutta Mishra Professor
- 2. Sri H.S. Behera Lecturer

Chartered Accountant

- 1. Sri M. Agrawal C.A.



8. OTHER SPECIAL FEATURES OF THE COURSE AND HOST DEPARTMENT :

This 2 year Master degree programme is an application oriented Self-financing course based on discipline of Economics and Management, which suits the requirement of students to join private sector, public sector and business houses.

The Course has the sole objective of generating experts in finance, who can handle complex financial problems of enterprises (public as well as private) with personal integrity and social responsibility. The students challenged through readings, case discussion, project formulation and solving complex business problems. The course curriculum covers key financial areas of finance and so designed to foster creative thinking and innovative approach among the students.

The Autonomous Department has the unique distinction in the State of introducing Quantitative Economics & Public Economics in teaching and Research. The Department has a very strong alumni with placement of the products of the Department in various national and international institutions. The Department has been associated with Govt. and other Non-governmental organizations in collaborative and consultancy work.

**4. P.G. DIPLOMA IN DEVELOPMENT JOURNALISM (1 YEAR)
IN THE P.G. DEPARTMENT OF POLITICAL SCIENCE AND
PUBLIC ADMINISTRATION**

Name of the Course Coordinator : Dr.(Mrs.) J. Xaxa Mob. No.9437420155

- 1. **ELIGIBILITY CRITERIA :** At least 45% of marks in M.A. in any discipline of Humanities and Social Sciences.
- 2. **SELECTION CRITERIA :** As per general selection criteria.
- 3. **DURATION OF THE COURSE:** 1 YEAR
- 4. **NUMBER OF SEATS:** 30 (minimum number to run the course-25)
- 5. **FEE STRUCTURE:** In addition to fees and subscriptions prescribed in the Prospectus at 12, a candidate shall pay Rs.7,500/- per Semester.
- 6. **COURSE STRUCTURE :**

1st Semester	
Course No.	Subject
DJ- 101	Mass- Media, Society and Polity
DJ- 102	Indian Political System
DJ- 103	Development Journalism and Communication
DJ- 104	Medial Organization and Management
DJ- 105	Media Laws and Ethics

2nd Semester	
Course No.	Subject
DJ- 201	Reporting and Feature- Writing
DJ- 202	Editing: Concepts and Process
DJ- 203	Practical Reporting
DJ- 204	Practical Editing
DJ- 205	Dissertation and Viva-Voce

7. **RELEVANCE OF THE COURSE :** The 1 year Diploma Course is intended and designed to prepare the students for the job of Journlist and media- Reporter for Mass media including TV, Radio, Newspaper etc.



5. MASTER OF SOCIAL WORK (MSW) IN THE P.G. DEPARTMENT OF ANTHROPOLOGY

Name of the Course Coordinator : **Dr. Ratnawali** Mob. No.08895765707

1. MINIMUM ELIGIBILITY: Any graduate securing 2nd class (Honours) or 45% of marks in aggregate in case of pass subjects. 5% relaxation in respect of the qualifying marks to be made for in-service candidates.

2. SELECTION CRITERIA: Written Test (60%), GD (20%), Personal Interview (10%), Career (10%)

CALCULATION OF CAREER MARKS

Degree	1 st Division	2 nd Division	3 rd Division	
HSCE	2.0	1.5	1.0	
+2	3.0	2.3	1.6	
+3 (Hons)	4.3	3.3	-	Distn – 0.7
+3 (Pass)	2.3	-	-	Distn – 0.7

3. DURATION OF THE COURSE: 2 years (Full-time), Course curriculum involves camp-based field work, observational visits and industrial tours.

4. TOTAL NO. OF SEATS: **32** (For Regular Candidates) **06** (For In-Service Sponsored Candidates In-service candidate has to produce a ‘no-objection certificate’ and ‘relief order’ from his/her employer at the time of admission, there shall be no relaxation in attendance for in-service candidates) in case of non-availability of suitable in-service candidate the seats will be filled up by the candidates of general category whose names will figure in the merit list.

5. FEE STRUCTURE

1st Semester

Course Fee: Rs. 12,000/- (for Regular candidates)
 Course Fee: Rs. 15,000/- (for In-service candidates)
 Development Fee: Rs.2,500/-
 Seminar Fee: Rs.1,000/-
 Infrastructure Fee: Rs.1500/-
 Examination Fee: As per University prescribed fee
 University Admission Fee for 2014-15:
 As per University prescribed fee

2nd Semester

Course Fee: Rs. 12,000/- (for Regular candidates)
 Course Fee: Rs. 15,000/- (for In-service candidates)
 Development Fee: Rs.2,500/-
 Fieldwork Fee: Rs.3,000/-
 Seminar Fee: Rs.1,000/-
 Registration Fee: Rs.500/-
 Examination Fee: As per University prescribed fee

3rd Semester

Course Fee: Rs. 12,000/- (for Regular candidates)
 Course Fee: Rs. 15,000/- (for In-service candidates)
 Development Fee: Rs.2,500/-
 Fieldwork Fee: Rs.3,000/-
 Seminar Fee: Rs.1,000/-
 Examination Fee: As per University prescribed fee

4th Semester

Course Fee: Rs. 12,000/- (for Regular candidates)
 Course Fee: Rs. 15,000/- (for In-service candidates)
 Development Fee: Rs.2,500/-
 Seminar Fee: Rs.1000/-
 Examination Fee: As per University prescribed fee

6. COURSE STRUCTURE: Framed along the line of the UGC model course curriculum for MSW (Total: 80 CH)

FIRST SEMESTER			SECOND SEMESTER		
Course No.	Title	CH	Course No.	Title	CH
MSW-411	History and Philosophy of Social Work	4 CH	MSW-421	Social Exclusion and Inclusive Policy	4 CH
MSW-412	Understanding Society and Culture	4 CH	MSW-422	Rehabilitation and Resettlement	4 CH
MSW-413	Social Work Research and Quantitative Analysis	4 CH	MSW-423	Social Work Methods	4 CH
MSW-414	Human Growth and Development	4 CH	MSW-424	Corporate Social Responsibility	4 CH
MSW-415	Criminology and Justice	4 CH	MSW-425 - a	Practicum –I, ‘Structured Experience Laboratory and Research methodology Practical’	2 CH
			MSW-425 - b	Practicum –II, ‘Micro Level Study on Social Exclusion’	2CH
Non-Credit	IT in Social Sector		Non-Credit	Community Intervention and Entrepreneurship Development	
Total		20 CH	Total		20 CH



THIRD SEMESTER			FOURTH SEMESTER		
Course No.	Title	CH	Course No.	Title	CH
MSW-511	Ideology and Ethics of Social Work	4 CH	MSW-521	Social Work Administration	4 CH
MSW-512	Social Legislation and labour Welfare	4 CH	MSW-522	Indian Polity and Public Policy	4 CH
MSW-513	Social Problem and Social Development	4 CH	MSW-523	Tribal Anthropology and Social Work	4 CH
MSW-514	Vulnerable Children and their Development	4 CH	MSW-524	'Poverty Reduction, Micro Finance and Micro Enterprises'	4 CH
MSW-515-a Practicum – III	'Skilled Development Assessment'	2 CH	MSW-525	Human Resource Development / Rural Development	4 CH
MSW-515-b Practicum – IV	Learning Social Work through Participatory Approach	2 CH	Non-Credit - I	Fundamental of Medical Social Work	
Non-Credit	'Disaster Preparedness and Management'		Non-Credit – II	'Block Field Work Placement'	
		Total			Total
		20 CH			20 CH

SPECIALIZATION OFFERED: (1) Human Resource Development (2) Community Development

7. COURSE FACULTY:

Core Faculty	
Prof. D.K. Behera (Anthropology)	Mr. S.C. Murmu (Anthropology)
Dr. Ratnawali (Anthropology)	Dr. R. Pramanik (Anthropology)
Mr. M. Biswal (MSW Programme, S.U.)	Miss S. Samal, (MSW Programme, S.U.)
Miss. B. Meher (MSW Programme, S.U.)	
Guest Faculty	
Prof. P.N. Sahu (Anthropology)	Prof. S. Panda (VSS Medical College, Burla)
Prof. Smita Panda (VSS Medical College, Burla)	Prof. Mamata Giri (VSS Medical College, Burla)
Prof. R.C. Giri (VSS Medical College, Burla)	Mr. J. Patjoshi (Dept. of Law, S.U.)
Dr. Lopamudra Mishra	Prof. B. Panda, (Dept. of Home Science, S.U.)
Prof. S.S. Ratha (Dept. of Economics, S.U.)	Prof. B.K. Mishra, (Dept. of Home Science, S.U.)
Mr. Sumanta Kerketta (Dept. of Business Admn., S.U.)	Er. D.K. Mahalik (Dept. of Business Admn., S.U.)
Prof. A.K. DasMohapatra (Dept. of Business Admn., S.U.)	Dr. Diptibala Pattnaik, Ex-Joint Director, Health
Prof. Mehul Chauhan, XIDAS, Jabalpur	Mr. Joy Gorge, Secretary, IRCS, Sambalpur Branch

8. SPECIAL FEATURES OF THE COURSE AND HOST DEPARTMENT

Sambalpur University launched MSW course from the academic session 2007-08. The course is being handled by a group of experienced faculty from the Post-Graduate Departments of Anthropology, Sociology, Economics, Political Science and Public Administration, Home Science, English, Business Administration and Law, The Department of Anthropology, Sambalpur University coordinates this self-financing course.

Infrastructure Facilities and Other Features

- Well-furnished classrooms, air-conditioned Conference Hall and computer laboratory with 16 computers and internet facility
- Use of LCD projector in class room teaching and transfer of course materials sent to students via internet, Photocopying facility
- Emphasis on capacity building (computer skill, communication skill, project writing and event management)



The Department

- Official headquarters of the International Commission on Children, Youth and Childhood.
- NLMA identified nodal agency for the evaluation of PLC and TLC outcomes.

Local Collaborations

- Dept. of Community Medicine, VSS Medical College, Burla, Sambalpur (Medical Social Work)
- Indian Red Cross Society, Sambalpur Branch
- Patang

MoU Signed with Overseas Institutions

- Institute for Ethnology, Free University of Berlin, Germany
- Dept. of Anthropology, University of Free State, South Africa
- Universidad Autonoma de NuevoLeon, Mexico
- Aarhus University, Denmark

Workshop/Training Programme Attended by the Students of MSW daring 2008-10

- National Seminar on “Human Genomic and Cultural Diversity,” , during March 2-4, 2009 organized by School of Studies in Anthropology, Pt. Ravi Shankar Shukla University, Raipur. Chattisgarh.
- National workshop “Status of Social Science Research and Teaching in Eastern India,” organised jointly by the School of Bio-Social Studies, Sambalpur University and Indian Council of Social Science Research, Eastern Regional Centre, Kolkata during February 17-19,2009.
- National Seminar on Dynamics of Tribal Development, during January 30-31, 2009 organized by Department Of Anthropology, Andhra University at Andhra University, Vishakapatnam, Andhra Pradesh.
- State-Level Workshop of Voluntary Blood Donors Organization on January 24-25, 2009, organized by Tyaga, Burla at MCL, Burla.
- Humanity and Applied science, on December 7-S, 2008 organized by Institute of Social Research and Applied Anthropology at Bidisa, Midinapur.
- Youth at Cross Roads, on October 15-16, 2008, organized by St. Aioysius College at Mangalore.
- National Conference and Workshop of Voluntary Blood Donors Organization, on May 10-12, 2008, organized by Tyaga, Burla at MCL, Burla.
- National Assembly And Workshop And Felicitation Ceremony of Voluntary Blood Donors Organizations And Motivators, organized by TYAGA,Orissa on December 25-27, 2009.
- Regional workshop on “Alternative Forms Of Care For The Children Without Parental Care”, at Sambalpur on December 18-19, 2009.
- Lets Volunteer For Our Planet organized by VSO INDIA, in association with Bakul Foundation in CYSD,at Bhubaneswar on December 5,2009.
- « Training on “Forest Rights Act”, organised by Vasundhara at CYSD, Bhubaneswar from October 29-31,2009.
- A Consultation on ‘Forest Right Act’, at CYSD, Bhubaneswar, organized by Vasundhara, Bhubaneswar, on September 1-2, 2009-
- “AHWAN- A Call For Action: Appreciating Diversity” organized by PATANQ, Sambalpur at Govt. Boys High School, Burla on August 20, 2009.
- Symposia on “Corporate Social Responsibility With Emphasis On Rehabilitation & Resettlement” organized by National Institute of Personal Management, Mahanadi Chapter ,MCL Burla on July 11, 2009.
- Participated in “Social Audit OfNREGS” in West Bengal in June, 2009.
- “Volunteer Fair” organized by VSO India, in association with Bakul Foundation in CYSD, Bhubaneswar on December 6,2008.

Invited Lectures Delivered by Overseas Scholars in the department

- Professor Marine Carin, Centre for Anthropology, Toulouse, france, 2008
- Dr. Uwe Skoda, Free University of Berlin, Germany, 2008
- Dr. Christian Strumpell, Free University of Berlin, Germany, 2008
- Dr. Sabastenia Zulie, University of Bonn, Germany, 2008
- Dr. Arun Kumar Acharya, Institute of Social Sciences, Monterrey, Mexico, 2008
- Dr. Lidiya Guzy, Institute for Ethnology, Free University of Berlin, 2007 and 2008



- Mr. Ken Snow, VOS, UK, 2008
- Dr. Uwe Skoda, Aarhus University, Denmark,2010
- Dr. Christian Strumpell, Free university of Berlin, Germany2009
- Dr. Lidiya Guzy, institute For Ethnology, Free University of Berlin 2009
- Mr. Ken Snow, VOS, UK, 2009
- Dr. Andey Richards, 2009
- Dr. Peter Berger, 2009
- Ms. EvaRitchel, 2009

Organization of International/National Workshop in Fast Years

- International Workshop: *Culture and Society of Western Orissa* (In collaboration with Institute of Ethnology, Free University of Berlin) 14 students from Free University of Berlin along with their teacher participated in the workshop, January 9-11, 2007.
- National Workshop: *Status of Social Science Research and Teaching in Eastern India*, organized jointly by School of Bio-Social Studies, Sambalpur University and Indian Council of Social Science Research, Eastern Regional Centre, Kolkata during March 17-19,2009.

For further details about the course, contact:

The Coordinator, MSW Program, Department of Anthropology, Sambalpur University, Sambalpur-768 019, Orissa Phone Number: Office: 0663-2432*60; Cell: 9437058426; Email: <behera.dk@gmail.com> Visit website: www.suniv.ac.in

**6. M.TECH IN ENVIRONMENTAL SCIENCE AND ENGINEERING
IN P.G.DEPARTMENT OF ENVIRONMENTAL SCIENCE (AUTONOMOUS)**

Name of the Course Coordinator : Dr. S.K. Pattanayak Mob. No.9439809787

- 1.MINIMUM ELIGIBILTY :** M.Sc in any Science subject or B.Tech /B.E degree in any professional Course with a minimum of four years education after +2 degree
- 2.SELECTION CRITERIA :** Career -30 marks , Written- 60 marks and Viva Voce 10 marks(Total 100)
With the following distribution

For General M.Sc.Students	First Dvn	Second Dvn	Third Dvn
H.S.C.E	6.0	4.5	3.0
+2	6.0	4.5	3.0
+3 (Hons)	9.0	7.0	5.0
Distinction	1.0	1.0	1.0
M.Sc.	8.0	6.0	4.0
For Professional degree students	First class Hons	First class	Second Class
B.E /B.Tech(after +2)	18	13	8

(When number of application is less than the sanctioned strength, merit list will be prepared on the basis of career mark only)

3.DURATION OF THE COURSE: 2 YEARS

4. NUMBER OF SEATS: 16 (Minimum number to run the course 10)

5. COURSE FEE: Rs.20,000/- per Semester for regular students. Rs.25,000/- per Semester for sponsored students. This is in addition to fee prescribed at Clause 12 of the Prospectus.



6. COURSE STRUCTURE :

FIRST SEMESTER :

CORE Course No.	Title of the Course	Credit Hours
ESE 611	Fundamentals of Ecology and Environmental Sciences	3
ESE 612	Environmental Chemistry, Pollution and Control	3
ESE 613	Environmental Policies and Laws	3
ESE 614	Environmental Microbiology	3
ESE 615 A OR	Advanced Applied Statistics, Environmental System Optimization and modeling	3
ESE 615 B OR	Environmental Toxicology	3
ESE 615 C	Industrial Safety and Management	
ESE 616	Laboratory: Environmental Monitoring I	3
ESE 617	Seminar presentation	2
Total Credit hours		20

SECOND SEMESTER

CORE Course No.	Title of the Course	Credit Hours
ESE 621	Instrumental Techniques and application in Environmental Science and Engineering	3
ESE 622	Environmental Impact Assessment, Environmental Audit and Environmental Management Systems	3
ESE 623 A	Air Quality Management	3
ESE 623 B	Remote Sensing and Geological information System	3
ESE 623 C	Hazards Control and Management in Industries	
ESE 624	Laboratory: Environmental Monitoring II	3
ESE 625	Seminar Presentation	2
ELECTIVE COURSE	A student shall select any one paper from ENS 623 And will have the option to choose any one of the following groups of Elective Course consisting of two papers, each of 3CH	
	GROUP I: Pollution Control and Management in Mining Industry	
ESE 626 A	Environmental aspects of Mining Industries	3
ESE 626 B	Solid and Hazardous Waste Management and land Reclamation	3
	GROUP II: Hydrogeology ,Watershed Management and Waste Water Engineering	
ESE 627 A	Hydrogeology and watershed Management	3
ESE 627 B	Waste water Engineering	3
	GROUP III: Environmental Geology	
ESE 628 A	Environmental Geology and Disaster management	3
ESE 628 B	Remote Sensing and Geological information System	3
	Total Credit hours	20
	GROUP III: Green Technology and Management	
ESE 629 A	Green Technology and Sustainable Development	3
ESE 629B	Soil Pollution and Waste Management	3
	Total Credit hours	20

A candidate shall select any one paper from ESE 623

- At the end of Second Semester, each student shall undergo one month summer training in an Industrial Establishment or Scientific Institution or any other organization and submit a Project Report on the activities for evaluation during third Semester. The student may ,in lieu of summer training , work on a minor project and submit the report for evaluation during the third semester.



- From the beginning of the third Semester ,a student shall work on a dissertation under the supervision of a suitable Guide from the P.G. Departments or outside including Scientists and Technocrats from Industries and Corporate Sectors with the approval of the Academic Committee. The dissertation will be evaluated both during Third semester (Interim) and Fourth Semester
- ESE 623 B can only be opted by students who do not belong to Environmental Geology Specialisation

THIRD SEMESTER

Course No.	Title of the Course	Credit Hours
ESE 711	Evaluation of Summer training Report/Minor Project Report	4
ESE 712	Seminar and Viva-Voce on Summer training Report/Minor Project Report	4
ESE 713	Comprehensive Viva-Voce	4
ESE 714	Evaluation of Dissertation(Interim) ,seminar and viva-Voce	8
Total Credit Hours		20

FOURTH SEMESTER

Course No.	Title of the Course	Credit Hours
ESE 721	Evaluation of Dissertation	12
ESE 722	Seminar on Dissertation	4
ESE 723	Viva-Voce on dissertation	4
Total Credit Hours		20

Total Credit Hours of the Semesters-80

- SPECIALIZATION OFFERED** :
1. Pollution Control and Management in Mining Industry
 2. Hydrogeology ,Watershed Management and Waste Water Engineering
 3. Environmental Geology
 4. Green Technology and Management

7.COURSE FACULTY : A. Core Faculty

Sl No.	Name of the teacher	Qualification	Area of Specialisation	Email address/ Telephone
1.	Prof. S.K.Sahu Professor	M.Sc,M.Phil Ph.D	Soil Biology & Biotechnology, Solid Waste Management, Vermitechnology and Ecotoxicology and Environmental Monitoring	sahusanjat@rediffmail.com sanjatenv@yahoo.com 91-663-2430654-R 2431033 - O
2.	Dr. S.K. Pattanayak Reader	M.Sc., Ph.D.	Geology and Geochemistry, GIS, Remote Sensing, Basin Studies, EIA and EMP, Disaster Management.	skp.envsu@gmail.com Tel-91-0663-2430855-R 2431033-O 9439809787-M
3.	Dr. M.R.Mahananda Lecturer	M.Sc., Ph.D	Ecotoxicogenomics, Genetic Toxicity, Molecular Mutagenesis, Microbial ecological study, Management of hazardous solid waste, Chemical hazards on reproductive health	malay_env@rediffmail.com tel-91-06632430316-R 2431033-O M-9337303767

**B-Guest Faculty**

- | | |
|-------------------------|---|
| 1.Prof.Niranjana Behera | Professor in Life Sciences ,Sambalpur University |
| 2.Prof.Ashutosh Naik | Professor in Earth Sciences ,Sambalpur University |
| 3.Prof.B.Behera | Retd.Professor in Chemistry ,Sambalpur University |
| 4.Mr.J.N.Patjoshi | Department of Law Sambalpur University |

Guest faculty from inside and outside the states are regularly invited to impart teaching in M.Tech Programme

C-Contractual Faculty

- 1.Dr.(Mrs.) R. Panda
- 2.Mr. A. Bhadra

8. OTHER SPECIAL FEATURES**a. About the M.Tech. Programme**

The M.Tech programme in Environmental Science and Engineering is first of its kind in the state and one of the few in the country and has successfully entered into the fourth year of its existence. It is a four semester UGC approved degree and Sambalpur University approved course. It has course work and research project component. It is a regular course and keeping in view of its usefulness to serving employees the teaching is imparted on all days (except Sunday) during afternoon / evening hours and from 10 to 4 pm on Sunday. The course structure includes advanced modules in Environmental Science and Engineering and has been designed at par with the other premier institutes of the country and keeping the employment opportunity of the students in view. Five M.Tech. students of the first batch of the Department have joined Vedanta Aluminium at Jharsuguda as Environmental Scientists.

b. About the Host Department

The Department of Environmental Sciences in Sambalpur University was approved by the University Grants Commission during seventh plan period and was established in 1989 as the only Post Graduate Department of its kind in the state of Orissa and one of the few in the country. The Department started M.Phil. programme from the academic session 1990-1991 and M.Sc. programme from the session 1994-95. At present the student intake is ten at M.Sc. level and six at M.Phil. level. In addition to this five seats at M.Sc. and two seats at M.Phil. are filled up as self-financing seats. The Department is now highly acclaimed for a programme on M.Tech. in Environmental Science and Engineering on self-financing basis from the session 2007-08. This year there is an intake of twenty students into this programme. Besides these, the Department is running two self-financing courses, namely, P.G. Diploma in Environmental Education and Management (PGDEEM) and P.G. Diploma in Industrial Safety and Health (PGDEEM) through Distance Education mode. Based on its academic excellence, the Department is granted academic autonomy from the session 2006-2007.

The Department offers courses at M.Sc., M.Phil. and M.Tech. levels on various aspects of Environmental Sciences like System Ecology, Population and Community Ecology, Environmental Pollution, Resource Conservation and Management, Instrumental Techniques, Computer application and data analysis, Forest Ecology, Environmental Law and Society, Environmental Toxicology, Soil Biology and Biotechnology, Ecological Monitoring, Soil Pollution and Waste Management, Applications of Remote Sensing and GIS into Environmental Science, Energy Resources, Environmental aspects of Mining Industry, Hydrology & Watershed Management, Waste Water Engineering, EIA and EMP etc. Besides these, Seminar and Summer Training, Term Paper & Dissertation work are also part of the course curricula. The course curricula of the Department have been updated from time to time to imbibe advanced knowledge in different areas of Environmental Science & Technology. To cater to the need of the students, the Department has a seminar library of about 600 books and a dozen of computers with Internet facilities and instruments relating to monitoring of air, water, soil and noise and analysis of biological samples etc.

Over the years the research activities have been carried out by the faculty members in the different areas of pollution monitoring, control and management. The teachers of the department have published a total number of 180 research papers in various national and international journals and 13 authored/edited books. As many as 17 Ph.D., 80 M.Phil. and 200 M.Sc. and 14 M.Tech. students have been awarded degrees from this Department. The Department has received financial support to the tune of Rs. 60 lakhs in the form of research projects from UGC, New Delhi, UNEP/GEF, INDAL, Hirakud, OPGC, Bhubaneswar, OSPCB, Bhubaneswar, NTPC, Farraka, NTPC, Kaniha, MCL, Sambalpur, ICMR, New Delhi. During 2003-2004, the department received a prestigious FIST grant of Rs. 20 lakhs from the Department of Science and Technology, Government of India to update the infrastructure facility of the Department.



The teachers of the Department are also associated with industries and other agencies in consultancy work on taxo-ecological enumeration of flora and fauna, air and water monitoring, management of organic waste through vermicomposting, fly ash utilization in agriculture, low cost waste water technology, assessment of quality of life of people around Development Projects, ecological enumeration of vegetation and their potential in carbon removal etc. The thrust and focus of the future research plan of the Department is Environmental Technology, Low-Cost Waste Water Treatment, Solid Waste Management, EIA and EMP Studies.

Since its inception, the Department has organised three National Seminars, three Workshops and ten U.G.C. sponsored Refresher Courses. The Department has already organized some national level Seminars viz. i) *Emerging Perspectives on Disaster management* during February 19-20, 2003 in collaboration with the Department of Anthropology, S.U., ii) *Environment and Sustainable Development* during March 17-18, 2007, and iii) *Sustainable Development of Earth Resources: Strategies on Management plan*, during February 13-14, 2010 in collaboration with the Department of Earth Sciences, S.U. The Department is on its way to organise an International Seminar on *Environment, Energy and Development (from Stockholm to Copenhagen and beyond)* during December 2010.

The teachers of the Department are also well recognized in their fields at National and International levels. Prof. P.C. Mishra has been nominated as a fellow of NIE, ZSI and Society of Environmental Sciences and is an Associate Fellow of International Congress of Chemistry and Environment. He is currently the president of Society of Environmental Science, Chief Editor of Indian Journal of Environment and Ecoplanning, Member of the Editorial Board in The International Journal of Chemistry and Environment, Bioscan, Indian Journal of Environmental Science. For his significant research contribution to Environmental Sciences he is felicitated with Prof. M.C. Dash gold medal instituted by ZSI, E.P. Odum Gold Medal by Society of Ecological Communication of India, Charles Darwin Gold Medal by Society of Ecological Communication of India. Prof. S.K. Sahu has also been accredited with young scientist award by Environmental Research Academy in the year 2001 for his significant research in the field of Environmental Sciences. He has been nominated as a Fellow of Zoological Society of India, Society for Sciences and International Society for Ecological Communications. He is currently the Assistant Editor of Journal of Food, Agriculture and Environment published from Finland. . The department has experts in the field of Biology, Chemistry, Environmental pollution and Management, Ecotoxicology, Soil Biology and Biotechnology, as well as Geology and Geochemistry.

A post graduate, MPhil or M.Tech. student or a researcher of the department gets ' an appropriate training of working together in an inter-disciplinary environment. Many alumni of the Department are well placed in different teaching and research positions in various Government, Semi-Government Institutions, Universities, SPCB, CPCB, National and Multinational organizations in India and abroad. Many students have also opted a career in NGO in Orissa and outside. At present the Department has five Ph.D. scholars with regular fellowship who are pursuing research in different facets of Environmental Science.

For further information, contact:

Dr. S.K. Pattanayak,

Department of Environmental Science, Sambalpur University, Jyoti Vihar-768019

(e.mail: skp.envsu@gmail.com) Tel-91-0663-2430855(R), 2431033(O), 9439809787(M)



7. M. Sc. IN APPLIED CHEMISTRY IN THE SCHOOL OF CHEMISTRY (AUTONOMOUS)

Name of the Course Coordinator : Dr. A.K. Behera

Mob.No.9337301281

1. ELIGIBILITY CRITERIA : (i) Hons. in Chemistry with Physics or Mathematics as the Pass subject or (ii) Chemistry/ Industrial Chemistry as a Pass subject with Mathematics and Physics with 45% marks in aggregate, (iii) B. Sc./ B.E./ B. Tech. in Chemical Engineering with minimum 45% in aggregate.

There will be a Common Entrance Test for the admission into M. Sc. in Chemistry and Applied Chemistry.

2. SELECTION CRITERIA: As per general selection criteria.

3. DURATION OF THE COURSE: 2 Years

4. NUMBER OF SEATS: 10

5. FEE STRUCTURE:

In addition to fees prescribed in the Prospectus at Clause-12, a candidate shall pay Rs.15,000/- per Semester as Course Fee at the time of admission to each Semester.

6. COURSE STRUCTURE:

COURSE No.	COURSE TITLE	CREDITS
1ST SEMESTER		
CHI- 401	GROUP THEORY, SOLID STATE AND NEUCLEAR CHEMISTRY	3
CHI- 402	INORGANIC REACTION DYNAMICS	3
CHO- 403	STRUCTURE AND REACTIVITY	3
CHO- 404	STERIO CHEMISTRY	3
CHP- 405	THERMODYNAMICS	3
CHP- 406	DYNAMICS	3
CHI- 407	INORGANIC GENERAL PRACTICAL	2
CHO- 408	ORGANIC GENERAL PRACTICAL	2
TOTAL		22
2ND SEMESTER		
CHI- 411	METAL π - COMPLEXES AND CLUSTERS	3
CHI- 412	BIO-INORGANIC CHEMISTRY	3
CHO- 413	ORGANIC REACTION MECHANISM- I	3
CHO- 414	ORGANIC REACTION MECHANISM- II	3
CHP- 415	QUANTUM CHEMISTRY	3
CHP- 416	SURFACE CHEMISTRY	3
CHP- 507	PHYSICAL GENERAL PRACTICAL-I	2
CHP- 508	PHYSICAL GENERAL PRACTICAL-II	2
TOTAL		22
3RD SEMESTER		
CHPJ	PROJECT	16
CHSM	SEMINAR	2
CHRV	REVIEW	2
TOTAL		20
4TH SEMESTER		
CHI-501	INSTRUMENTAL METHODS OF ANALYSIS	3
CHIn-542	INDUSTRIAL POLLUTION AND ITS MANAGEMENT	3
CHIn-547	INDUSTRIAL POLICY AND ENTERPRENEURSHIP	2
CHC-551	COMPUTER APPLICATION IN CHEMISTRY	2
	Elective courses (CHIn-548-CHIn-567) with 3 credit each. A student will choose four theory elective courses.	12
CHC-552	PRACTICAL ON COMPUTER IN CHEMISTRY	2
CHA-536	INDUSTRIAL PRACTICAL	2
TOTAL		26



COURSE No.	COURSE TITLE	CREDITS
4TH SEMESTER (ELECTIVE COURSES)		
A student will choose 4 theory elective courses		
CHIn-548	ENERGY AND MATERIAL BALANCE	3
CHIn-549	WASTE MANAGEMENT AND RECYCLING	3
CHIn-550	NANO MATERIALS	3
CHIn-551	MEDICINAL CHEMISTRY	3
CHIn-552	PHARMACEUTICAL CHEMISTRY	3
CHIn-553	SOIL AND FERTILISER CHEMISTRY	3
CHIn-554	CHEMISTRY OR TOXICOLOGY	3
CHIn-555	FOOD CHEMISTRY	3
CHIn-556	RUBBER CHEMISTRY	3
CHIn-557	SEPARATION SCIENCE	3
CHIn-558	CORROSION CHEMISTRY	3
CHIn-559	GREEN CHEMISTRY	3
CHIn-560	ADVANCED MATERIALS	3
CHIn-561	FERROALLOYS	3
CHIn-562	CERAMICS	3
CHIn-563	SURFACTANT AND DETERGENT	3
CHIn-564	POLYMERS AND PLASTIC	3
CHIn-565	PULP AND PAPER CHEMISTRY	3
CHIn-566	OIL EXTRACTION TECHNOLOGY	3
CHIn-567	DRUG AND DRUG DELIVERY	3

7. COURSE FACULTY : Core faculty of the School of Chemistry and other Guest Faculty.



**8. M.TECH. IN FOOD SCIENCE & TECHNOLOGY
IN THE CENTRE FOR FOOD SCIENCE & TECHNOLOGY**

(IN COLLABORATION WITH SCHOOL OF CHEMISTRY AND SCHOOL OF LIFE SCIENCES)

Name of the Course Coordinator : Prof.(Mrs.) B.K. Mishra Mob. No.9861133954

1. MINIMUM ELIGIBILITY: A candidate with a minimum Master Degree in any Science Subject or B.E and B. Tech degree holder in related subjects of four years study after +2 Science , with a minimum of 45% marks are eligible.

2. SELECTION CRITERIA: Career-30 marks, Written test-60 marks, and Viva-voce-10 Marks (Total-100 Marks), with the following distribution. (When the number of application is less than the sanctioned strength, merit list will be prepared on the basis of, career marks only.)

For General M.Sc students	First Division	Second Division	Third Division
H.S.C.E/ or equivalent	6.0	4.5	3.0
+2/ Or equivalent	6.0	4.5	3.0
+3 Honours	9.0	7.0	5.0
Distinction	1.0	1.0	1.0
M.Sc	8.0	6.0	4.0
For Professional Degree Student	First class Honours	First Class	Second Class
B.E/B.Teachafter+2	18	13	8

3.DURATION OF THE COURSE:2 YEARS

4. NUMBER OF SEATS: Annual intake of 20 (including 4 sponsored candidates) with reservation as per rule

5.COURSE FEE: Rs. 25,000/- per Semester for regular Students and Rs 35,000/- per Semester for Sponsored Students. This is in addition to the fee prescribed at clause 12 of the prospectus.

6. COURSE STRUCTURE:

COURSE NO.	TITLE OF THE COURSE	CREDIT HOURS
FIRST SEMESTER		
FST-611	Food Chemistry and Analysis	04
FST-612	Food Microbiology	04
FST-613	Principles of Food processing & Post harvest Technology	04
FST-614	Food Engineering-I (Upstream Processing of foods)	04
FST-615	Practical Related to FST-611 & FST-612	02
FST-616	Practical Related to FST-613 & FST-614	02
	Total Credits	20
SECOND SEMESTER		
FST-621	Fermentation Technology & Food products	04
FST-622	Food Engineering-II (Downstream Processing of foods)	04
FST-623	Marketing of food products, Food safety & Food Laws	04
FST-624	Elective Paper (Any One)	04
	Protein Technology Technology of	
FST-625	Practical Related to FST-621	02
FST-626	Practical Related to FST-622	02
	Total Credits	20



COURSE NO.	TITLE OF THE COURSE	CREDIT HOURS
THIRD SEMESTER		
FST-711	Term Paper	06
FST-712	Industrial Tour Report	06
FST-713	Seminar	03
FST-714	Interim Project Report	05
	Total Credits	20
FOURTH SEMESTER		
FST-721	Project Report and Evaluation	15
FST-722	Project Presentation	03
FST-723	Comprehensive Viva-Voce	02
	Total Credits	20

- * From the beginning of the Third Semester, a student shall select a topic related to the COURSE and write a term paper on the selected topic which will be evaluated at the end of the Third Semester.
- * At the end of Second semester each student shall visit one Industrial Establishment or Scientific Institution or any other course-related organization and submit a report on the activities for evaluation during Third Semester.
- * From the beginning of the Third Semester, a student shall work on a Dissertation under the supervision of a suitable Guide from the P.G. Departments or outside including scientist and technocrats from Industries and Corporate sector with the approval of the Academic Committee. The dissertation will be evaluated both during Third Semester (Interim) and Fourth Semester (Final).

SPECIALISATION OFFERED:

- Protein Technology
- Technology of Dairy Products
- Technology of cereals, pulses and oilseeds
- Post harvest management of fruits and vegetables
- Bakery and Confectionary Technology
- Beverages and Snacks food Technology

7. COURSE FACULTY:

(a) School of Life Sciences

1. Dr. J. Panigrahi
2. Dr. E. Kariali
3. Dr. S.P. Mishra
4. Dr. (Mrs) B. Nayak
5. Dr. (Mrs) S. Sahoo
6. Dr. J. Rath

Specialization

- Molecular Biology
- Physiology
- Microbiology
- Biochemistry
- Soil Ecology
- Biochemistry

(b) Department of Chemistry Specialisation

1. Prof. B.K. Mishra Organic Chemistry
2. Prof. P. K. Mishra Surface Science
3. Dr. P. K. Behera Photochemistry
4. Dr. A. K. Behera Organic Synthesis
5. Dr. A. Mohapatra Inorganic Synthesis
6. Dr. S.N. Sahu Organic Chemistry
7. Dr. B.N.Patro Polymer Chemistry

(c) Department of Home Science

1. Prof. (Mrs) B.K. Mishra
2. Prof. (Mrs) B. Panda
3. Mr. S.R. Purohit

Specialization

- Food & Nutrition
- Community Nutrition
- Food Science & Technology

* Guest Faculty/ Resource Persons from other Departments/University/Institutes will be invited from time to time to cover the courses as per the requirement



8. INFRASTRUCTURE AVAILABLE: The **Center for Food Science and Technology** has been established by the University to offer courses on Food Science and Technology and to carry out research in areas of Food Science, Food Technology, Food Processing and Nutrition.

Major Equipments Available: The laboratories are well equipped with sophisticated equipments like Uv Visible spectrophotometer, Millipore water purification system, laminar air flow, Packaging machine, Vacuum rotary evaporator, Hot air oven, Bacteriological Incubator, Freeze Drier, Vacuum concentrator, Flame photometer, Colour flex, Cooling flex, Cooling centrifuge, Orbital shaking Incubator, TLC assembly, Electrophoresis, Deep freeze, Autoclave, Projection microscope, Texture analyzer, Chromatography, Canning unit, Emulsifying machine, Humidity convection oven, Refractometer, Package testing machine etc.

9. SPECIAL FEATURE OF THE COURSE: The new M.Tech. Programme in Food Science & Technology is interdisciplinary in nature. Food Science & Technology is a discipline concerned with all the technical aspects of food, beginning with harvesting / slaughtering, and ending with its packaging and marketing. It incorporates concepts from many different fields including microbiology, chemical engineering, biochemistry, nutrition, marketing, and others. It is an exciting area that applies a blend of basic sciences such as biology, chemistry, and physics with microbiology, biochemistry, mathematics, and engineering to improve the taste, nutrition, and value of the world's food supply. Food scientists extend this knowledge to the development of new food products, packaging, processes, and equipments. Examples of the activities of food scientists include the development of new food products, design of processes to produce these foods, choice of packaging materials, shelf-life studies, and sensory evaluation of the product with trained expert panels or potential consumers, as well as microbiological and chemical testing. M.Tech in Food Science & Technology can successfully prepare students to compete in this market. They will learn innovative technology that has been successful in placing nearly 100 percent of students in careers in product development, research, sales and marketing, quality assurance, production management, analytical and technical services, and regulatory food inspection as well as into higher education or professional programs.

10 CAREER PROSPECT: Food Processing Industry is a very fast emerging industry with good job prospects in India and abroad. Processed and preserved foodstuffs have been instrumental in bringing about a change in the food habits of a large urban populace. From eating merely for subsistence, people now prefer to supplement their diet with 'value-added food'. Increase in consumption of processed foods is noticeable across various sections of the population and the trend of 'eating out' has grown manifold. In tune with these trends, the market for processed food is growing significantly. The food industry is the fifth largest industry in the country. Currently, it generates employment for about 20 lakhs people and will generate new jobs to the extent of 2.5 lakhs every year. It is estimated that the ratio of various types of jobs available in today's scenario in the country are: i). Factory production: 60%; ii) Research & Development (R&D): 15%; iii). Government laboratories: 3%; iv) Teaching: 2%; v). Other jobs: 20%. The stepping-in of multi-national companies (MNCs) has further increased job prospects and lucrative salary packages in this industry. There is a plethora of opportunities for Food technologists and Food Scientists, mainly in institutions like processing industries, hotels, food industries, quality control, hospitals, packaging industries, distilleries, bakery industries, soft drink factories, product design, pharmaceutical industry, biochemical engineering, spice, cereal and rice mills etc. Some of the exciting opportunities available as a career in Food Science include; new product development and product improvement; food packaging; technical service and sales; food safety; and regulatory food inspection and quality control. Self-employment through establishing startup projects is an important area for the post graduates of food technology. There are several government schemes for establishing small and medium enterprises. Even the Government of India is giving some subsidy and providing loans through nationalized banks to encourage entrepreneurship programmes, which work out to be an easy route to set-up their own business.

11 TRAINING AND PLACEMENT: Till now centre has recommended students for hands on training in both on-campus and off-campus institutions. Ten students have already completed their M.Tech. research projects from reputed institutions like IIT, Delhi, CFTRI, Mysore, IICPT, Tanjur, CRRI, Cuttack etc. Seven students got placed after their degree which accounts for 50% of the students passed in the 1st batch of the centre. The Centre is expecting to excel in training and placement in future.



9. M.Sc. IN FOOD SCIENCE & NUTRITION IN THE CENTRE FOR FOOD SCIENCE & TECHNOLOGY

Name of the Course Coordinator : Prof.(Mrs.) B.K. Mishra Mob. No.9861133954

1. MINIMUM ELIGIBILITY: Any Science Graduate or any Technical/ Professional Graduate (MBBS, BE, B, Tech, BSc Ag, B.Pharm, B.Sc Home Science, and other related subjects of four years study after +2 Science)of Sambalpur University or of any other University recognized by Sambalpur University as equivalent thereto with a minimum of 45% marks is eligible. Graduates with Home Science Honours/ Pass along with P.G Diploma, Diploma, or Certificate Course in any of the subjects like Food & Nutrition/ Nutrition & Health Education/ Nutrition & Dietetics/ Hospital & Health Management and other related subjects with a minimum of 45% marks at Graduation level are also eligible for admission to M.Sc in Food Science& Nutrition.

2. SELECTION CRITERIA: Career-30 marks, written test-60 marks, and Viva-voce-10 Marks (Total-100 Marks). When the number of applications is less than the sanctioned strength, merit list will be prepared on the basis of career marks only.

For students who have passed Technical/professional Graduates

Degree	First Division	Second Division	Third Division/Pass
High School	6	4.5	3.0
+2	9	7	5
B.E./B.Tech./B.Sc. Home Sc./ B.Pharm (4 years study after +2)			
First Class Hons or equivalent grade - 75% marks or above			15
First Class or equivalent grade - above 60% marks and below 75%			13
Second Class or equivalent grade - above 50% marks and below 60%			10
Pass or equivalent grade with below 50% marks			07

3. DURATION OF THE COURSE: 2 Years

4. NUMBER OF SEATS: 20 with reservation as per rule.

5. COURSE FEE: Rs. 15,000/- per Semester per Student. This is in addition to the fee prescribed at clause 12 of the prospectus.

6. COURSE STRUCTURE: Total Course Credits = 80

Course No.	Title of the Course	Credit Hours
FIRST SEMESTER		
FSN-411	Research Methodology	04
FSN-412	Statistical Methods & Computer Application	04
FSN-413	Extension Education & Communication	04
FSN-414	Environmental Management	04
FSN-415	Practical related to 411 & 412	02
FSN-416	Practical related to 413 & 414	02
	Total Credits	20
SECOND SEMESTER		
FSN-421	Advanced Food Science	04
FSN-422	Food Microbiology	04
FSN-423	Food Analysis	04
FSN-424	Community Health Management	04
FSN-425	Practical related to all the theory papers	02
FSN-426	Writing of Term Paper & Seminar	02
	Total Credits	20



Course No.	Title of the Course	Credit Hours
THIRD SEMESTER		
FSN-511	Advanced Human Physiology	04
FSN-512	Therapeutic Nutrition	04
FSN-513	Nutritional Biochemistry	04
FSN-514	Advanced Nutrition	04
FSN-515	Practical related to all the theory papers	02
FSN-516	Dissertation (Evaluation Through Seminar presentation) (Writing of Synopsis &Field Work/Experimental work)	02
	Total Credits	20
FOURTH SEMESTER(A candidate Has to select any three elective papers)		
FSN-521	Nutrition through lifecycle (elective)	04
FSN-522	Problems in Human Nutrition (elective)	04
FSN-523	Food Processing Technologies (elective)	04
FSN-524	Food Service Management (elective)	04
FSN-525	Nutrition & Health of Women (elective)	04
FSN-526	Dissertation (Final thesis evaluation along with viva voce)	06
FSN-527	Seminar	02
	Total Credits	20

•From the beginning of the Third Semester, a student shall work on a Dissertation under the supervision of a suitable Guide from the P.G. Departments or outside including Scientist and Technocrats from Industries and Corporate sector with the approval of the Academic Committee. The dissertation will be evaluated both during Third Semester (fieldwork/ experimental work) and Fourth Semester (Final).

7. COURSE FACULTY:

(a)Department of Home Science

- 1.Prof. (Mrs) B.K. Mishra
- 2.Prof. (Mrs) B. Panda
- 3.Er. S.R. Purohit

(b)School of Life Sciences

- 1.Prof. N. Behera
- 2.Dr. J. Panigrahi
- 3.Dr. S.P. Mishra
- 4.Dr. A.K.Patel
- 5.Dr. J. Rath

(c)Department of Chemistry

1. Prof. B.K. Mishra
2. Prof.(Mrs) P. K. Mishra

(d)Department of Environmental Sciences

1. Prof.S.K. Sahu

Specialization

- Food & Nutrition
- Community Nutrition
- Food processing Technology

Specialization

- Microbiology
- Molecular Biology
- Microbiology
- Microbiology
- Biochemistry

Specialization

- Organic Chemistry
- Surface Science

Specialization

- Soil Biology & Biotechnology

• Guest Faculty/ Resource Persons from other Departments/University/Institutes will be invited from time to time to cover the courses as per the requirement



8. INFRASTRUCTURE AVAILABLE: The **Center for Food Science and Technology** has been established by the University to offer courses on Food Science and Technology and to carry out research in areas of Food Science, Food Technology, Food Processing and Nutrition. Till the Center acquires its own building and other infrastructural facilities the course will run with the facilities available in the department of Home Science. The newly constructed Food Science Technology Laboratory with the funding of the MoFPI, Government of India, will cater to the requirements of the students of this programme.

9. SPECIAL FEATURE OF THE COURSE: M. Sc. in Food Science and Nutrition programme focuses on the interface between Human Nutrition and Food Science, an area of increasing importance to Consumers, Government and the Food Industry. This M.Sc programme is interdisciplinary in nature and is a challenging and practical course which demands a good grasp of knowledge in science. The aim of the course is to provide knowledge and understanding of Fundamentals of Human Nutrition, Nutrition through Life Cycle, Nutrition in Health and Disease, Metabolism, Chemistry of Food Components, Public Health Science, Nutrition and Lifestyle, Research Methodology in Nutrition, Introduction to Food Microbiology, Sensory Attributes of Food, Statistics and Epidemiology, Microbial Quality Assurance and Regulation etc.

This programme will enable to develop:

- An understanding of the subjects at the interface between human nutrition and food science.
- An understanding of food constituents in the context of their manufacture and storage, particularly from the standpoints of safety and nutritional attributes.
- One's capacity to undertake research in food and nutrition.
- An understanding of diet and health issues, the implications for public health and impact on the food chain and associated industries.
- Skills in critical appraisal of data, presentational and interpersonal skills.

10. CAREER PROSPECT: This M.Sc. programme is for those wishing to develop a career in food-related research or the food industry. It is designed to meet the increasing demand for nutrition scientists experienced in human nutritional trials and in the evaluation of physiological, biochemical and molecular basis for effects of diet on human health. As a food nutritionist, one is endowed with the skills and knowledge to improve another's quality of life. Right from providing assistance in planning meals in times of old age, sickness or extreme stress, to advising them with regards to healthy eating-selection. Clientele for food nutritionists are perpetually on the rise as the era of junk food has irrevocably taken on a toll on many lives. Demand for food nutritionists is prevalent in hospitals that require their services for fixing nutritional regimens. Even athletes in physical training camps or mountaineers rely heavily on the instructions of a well qualified nutritionist. Moreover, even restaurants employ candidates with degrees in Food & Nutrition, Food Technology, Nutrition or Food Services Management. Thus nowadays, Food Science & Nutrition is one of the vital and growing fields where one can get endless opportunities if looking to build up a career. Dieticians /Nutritionists/ Food Technologists are required everywhere like hospitals, nursing homes, canteens, health clubs, catering unit of star hotels, government's health departments, food manufacturing companies and even in recreation clubs. Other noble options are to teach the subject in colleges or universities and to work as specialists to practice privately. Moreover, job offers will also come from mass media which prioritize the circulation of important information on healthy life. The main area of a food scientist cum nutritionists' work is Food Service Industry, Institutional Catering, Research and Development and Social Welfare, Health Care field etc. Food service consists of Restaurants and Catering service where nutritionists need to plan the menu and monitor food preparation. Same as Food service, Institutional Catering even requires dietetics professionals to plan, administer and arrange nutritious balanced diets for cafeterias of schools, colleges, offices, factories etc. Apart from that, their work might include evaluation and acquisition of food materials and equipment, checking and receiving inventories of supplies etc. Professionals carrying on such work are recognized as Administrative or Management Nutritionists. Nutritionists involved in Social Welfare activities, often called as Community dietitian or Public Health Nutritionists are mostly attached to government-aided public health divisions to improve the mass food habits and public health. Our post graduates can therefore expect to find themselves in demand from employers and often have to choose from several excellent job offers.



**10. P.G.DIPLOMA IN FOOD SCIENCE & TECHNOLOGY
IN THE CENTER FOR FOOD SCIENCE & TECHNOLOGY
P.G. DEPARTMENT OF HOME SCIENCE**

(In collaboration with Department of Home Science, School of Chemistry and School of Life Sciences)

Name of the Course Coordinator : Prof.(Mrs.) B.K. Mishra Mob. No.9861133954

- 1. MINIMUM ELIGIBILITY:** Graduate in any discipline of Science/Technology/other related course with a minimum of 45% marks or Graduate in Arts with Home Science Honours.
- 2. SELECTION CRITERIA:** Career-30 marks, written test-60 marks, and Viva-voce-10 Marks (Total-100 Marks), with the following distribution. (When the number of application is less than the sanctioned strength, merit list will be prepared on the basis of career marks only.)

For General M.Sc students	First Division	Second Division	Third Division	
H.S.C.E/ or equivalent	6.0	4.5	3.0	
+2/ Or equivalent	9.0	7.0	5.0	
+3 Honours	13.0	10.0	7.0(Pass)	
Distinction	2.0	2.0	2.0	
For Professional Degree Student	First class Honours ($\geq 75\%$)	First Class (60%)	Second Class (50%)	Third Division/Pass
B.E/B.Tech after +2	15	\geq 13	10	07

- 3. DURATION OF THE COURSE:** 2 years
- 4. NUMBER OF SEATS:** 20 (including 4 sponsored candidates)
- 5. FEE STRUCTURE:** Rs. 15,000/- per Semester for regular Students and Rs 20,000/- per Semester for Sponsored Students. This is in addition to the fee prescribed at clause 12 of the prospectus.
- 6. COURSE STRUCTURE:** Total Course Credit = 40

First Semester		
Course No.	Title of the Course	CH
PGDFST-411	Food Chemistry and Analysis	04CH
PGDFST-412	Food Microbiology	04CH
PGDFST-413	Principles of Food processing & Post harvest Technology	04CH
PGDFST-414	Food Engineering & Management	04CH
PGDFST-415	Practical Related to -411,412,	02CH
PGDFST-416	Practical Related to -413,414,	02CH
	Total	20CH



S e c o n d S e m e s t e r		
Course No.	Title of the Course	CH
PGDFST-421	Term paper Or elective paper (To be Selected by the candidate)	04CH
PGDFST-422	Seminar	02CH
PGDFST-423	Industrial report	02CH
PGDFST-424	Project report	10CH
PGDFST-425	Comprehensive Viva Voce	02CH
	Total	20CH

- ◆ From the beginning of the second Semester, a student shall select a topic related to the course and write a term paper on the selected topic which will be evaluated at the end of the Semester.
- ◆ At the end of first semester each student shall visit one Industrial Establishment or Scientific Institution or any other course-related organization , and submit a report on the activities for evaluation during second Semester.
- ◆ From the beginning of the second Semester, a student shall work on a project under the supervision of a suitable Guide from the P.G. Departments or outside including scientist and technocrats from Industries and Corporate sector with the approval of the Academic Committee. The dissertation will be evaluated both during the end of the Semester .

7. COURSE FACULTY:

(a) School of Life Sciences

1. Dr. J. Panigrahi
2. Dr. E. Kariali
3. Dr. S.P. Mishra
4. Dr. (Mrs) B. Nayak
5. Dr. (Mrs) S. Sahoo
6. Dr. J. Rath

Specialization

- Molecular Biology
- Physiology
- Microbiology
- Biochemistry
- Soil Ecology
- Biochemistry

b) Department of Chemistry

1. Prof. B.K. Mishra
2. Prof. P. K. Mishra
3. Dr. P. K. Behera
4. Dr. A. K. Behera
5. Dr. A. Mohapatra
6. Dr. S.N. Sahu
7. Dr. B.N.Patro

Specialisation

- Organic Chemistry
- Surface Science
- Photochemistry
- Organic Synthesis
- Inorganic Synthesis
- Organic Chemistry
- Polymer Chemistry

(c) Department of Home Science

- 1 . Prof. (Mrs) B.K. Mishra
2. Prof.(Mrs) B. Panda
3. Er. S.R. Purohit

Specialization

- Food & Nutrition
- Community Nutrition
- Food Science & Technology

8. INFRASTRUCTURE AVAILABLE: The infrastructure facilities available in the Center for Food Science and Technology and three collaborating departments, i.e. Department of Home Science, School of Chemistry and School of Life Sciences for the M. Tech Programme in Food Science & Technology will be made available for this programme also.



**11. M. TECH. IN GEOSPATIAL TECHNOLOGY
IN THE P.G. DEPARTMENT OF EARTH SCIENCES**

Name of the Course Coordinator : Dr. J.K. Tripathy

Mob. No. 9437444750

- 1. Minimum eligibility:** Master degree in any Science subject or Science graduate with P. G. Dip. in Remote Sensing & GIS or B.E / B. Tech degree in any branch with a minimum of 45% marks.
- 2. Selection criteria:** As per general selection criteria with the following distribution of career marks.

For general M. Sc. Student	First Division	Second Division	Third Division/ Pass
H.S.C. E.	5.0	4.0	3.0
+2	5.0	4.0	3.0
+3 (Hons)	6.0	4.0	2
Distinction	1.0	1.0	1.0
P. G. Diploma in RS & GIS	13.0	10.0	7.0
M. Sc.	13.0	10.0	7.0
For professional degree student	First class Hons	First class	Second class
B. Tech/ B. E. degree holder (after +2)	20.0	15.0	10.0

(When the number of applications is less than the sanctioned strength, merit list will be prepared on the basis of Career marks only)

3. Duration of the Course: 2 years

4. No. of seats : 16

5. Fee Structure: Rs.20,000/- per Semester for regular students and Rs. 25,000/- per Semester for sponsored students in addition to the fee prescribed at Clause 12 of the admission prospectus.

6. Course Structure:

First year- 1st Semester		
Course No.	Course Name	Credit hours
GT. 411	Basic Principles of Geospatial Technology, Survey, Thematic Mapping and Cartography	4CH
GT. 412	Earth features and phenomena, Earth Resources and Resource Management	4CH
GT. 413	Principles of Aerial Remote Sensing and Photogrammetry	4CH
GT. 414	Satellite, Microwave and thermal infrared Remote Sensing	4CH
GT. 415	Practical on Survey and Cartography, Report on Lab./ Field Visits	2CH
GT. 416	Practical on Aerial Photographs, satellite images, Term paper	2CH
First year- 2nd Semester		
Course No.	Subjects	Credit hours
GT.421	Statistical data analysis and Spatial statistics	4CH
GT.422	Computer Programming and Database Management	4CH
GT.423	Digital Image Processing, Correction and Interpretation	4CH
GT.424	Digital Elevation Modelling and Global Positioning System	4CH
GT.425	Practical on Statistical data analysis, Computer Programming, and Digital image processing	2CH
GT. 426	Report on Field Visits / Seminar	2CH



Second year- 3rd Semester		
Course No.	Subjects	Credit hours
GT.511	Elective (any one of the following)	4 CH
	a. Application of Geographic Information Systems in Geology, Geotechnical Engineering and Engineering Geology	
	b. Application of Geographic Information Systems in Geography, Human settlement, Land use studies and Archeology	
	c. Application of Geographic Information Systems in Environmental studies and Natural Resource Management	
	d. Application of Geographic Information Systems in surface and subsurface water resources, Oceanic studies, Fishery and Meteorology	
	e. Application of Geographic Information Systems in Ecology, Agriculture and Forestry	
GT.512	(Training in a reputed institute on Digital Image Processing,/GIS or GPS) Report on field Training	12 CH
GT.513	Seminar (at least 4)	4 CH
Second year- 4th Semester		
GT.521	Dissertation on any topic on Remote Sensing, Geographical Information System(GIS)/ Global Positioning System (GPS) under the guidance of a faculty of the Dept./ Scientist of a RS-GIS Institute/ Company (*12 CH Dissertation, 4 CH Viva Voce on Dissertation, 4 CH Seminar on Dissertation)	20 CH*

7. Course Faculty:

Core Faculty	
1. Prof. Ashutosh Naik (Dept. of Earth Sciences)	2. Mr. Duryadhan Behera (Dept. of Earth Sciences)
3. Prof. P. C. Mishra (Dept. of Environmental Sciences)	4. Dr. Sanjaya Kumar Pattanayak (Dept. of Environmental Sciences)
5. Prof. Niranjana Behera (School of Life Sciences)	6. Dr. C. Tripathy (Dept. of Statistics)
7. Prof. Biswajit Satapathy (Dept. of Business Administration)	8. Dr. D. K. Mahalik (Dept. of Business Administration)
9. Mr. C. S. Panda (Dept. of Computer Science)	
Visiting Faculty	
1. Prof. Gopal Krushna Panda (Dept. of Geography, Utkal University)	2. Prof. N. Patel (Birla Institute of Technology, Mesra, Ranchi)
3. Prof. P. K. Verma (Dept. of Geology, Vikram Uni., Ujjain)	4. Dr. S. B. Chaudhury (National Remote Sensing Centre, Hyderabad)
5. Dr. Kalicharan Sahoo (Dept. of Marine Sciences, Berhampur Uni.)	6. Dr. Jadish Tripathy (Dept. of Geology, Ravenshaw University)
7. S. N. Mohapatra (Dept. of Geology, Jiwaji University, Gwalior)	8. A. S. Jasrotia (Dept. of Geology, Jammu University, Jammu)
9. Dr. Dipti Ranjan Satapathy IMMT, Bhubaneswar	10. Dr. Rabi Samal Scientist, CDA, Bhubaneswar
11. Dr. B. Mishra, GIS Specialist, OSDMA, Bhubaneswar	12. Dr. Jayanta Kumar Jena Reliance
13. Mr. Ranjan Kumar Mallik, GIS Specialist, Geospatial Solutions	14. Mr. Rajat Satapathy GIS Specialist



8. Other special features

a. About the M. Tec. Programme

Geospatial Technology is the branch of technology that deals with the “georeferenced” ‘spatial data”. Georeferenced means “relating things to the relative position on the earth’s surface”. Thus, Geospatial Technology refers to the technology used for visualization, measurement, and analysis of features or phenomena that occur on the earth.

Geospatial Technology includes three different technologies that are all related to mapping features on the surface of the earth. These three technology systems are RS (Remote Sensing) GIS (Geographical Information Systems) and GPS (global positioning systems).

GT offers cost-effective solutions that tailor to the specific needs of the individual client. The system modules are designed in such a flexible way, that clients with different operation scales find it easy to choose from options of System implementation, tracking devices and GIS data, that can serve their needs as well as fit their budgets.

The M. Tech. in Geospatial Technology is first of its kind in the state. It is a four semester course approved by Sambalpur University. It has theoretical, practical and research project / training component. It is a regular course but keeping the requirements of employed persons pursuing the course, the teaching shall be imparted in the after noon/ evening hours on all working days and from 10.00 AM to 5.00 PM on Sundays and other holidays. Advance topics in the fields of Remote Sensing, Cartography, Digital Image processing, GIS, GPS and DEM have been included to meet the requirements of employers. The admitted students will be sent to leading GIS companies for training/ project work in the second year.

b. About the host Department:

The Dept. of Earth Sciences of Sambalpur University was established with the approval of University Grants Commission in 1984. It is the only Department in the state to offer M. Sc. Applied Geology and M. Phil. Applied Geology in the state. The Dept. also offers a P. G. Diploma course in Remote Sensing and GIS in Distance Education mode.

Remote Sensing, Digital Image processing and GIS has been taught as an integral part of M. Sc. and M. Phil. Applied Geology courses since the inception of these programmes. Taking into consideration the importance of the subject and job opportunity in the coming years the Dept. decided to offer the Geospatial Technology course for the first time in Odisha. The Dept. has all the basic laboratory facilities needed for the subject. However, there is lot of scope for further upgradation of the facilities in the RS & GIS Laboratories and shall be done as per the requirement of the students.

The Department has organized fourteen National level seminars/ conferences/ workshops and refresher courses since its inception. Those related to RS & GIS are-

1. Workshop on Application of Remote sensing Data (22nd March, 1993)
2. National level workshop on Geospatial Technology for Earth Resources and Environmental Management (17th-18th, February, 2007).
3. Workshop on Remote Sensing Application in Mineral Exploration (13th-14th December, 2010)
4. Refresher course on Remote Sensing and GIS Application (24th January, 2011 - 13th February, 2011)

**12. MBA IN RURAL MANAGEMENT (P.G. Department of Business Administration)**

Name of the Course Coordinator: Dr. P. C. Tripathy

Mobile- 9438060667

- 1. ELIGIBILITY CRITERIA:** Any graduate with 45% of marks in aggregate. Minimum qualifying marks of 45% shall not be insisted for SC & ST candidates.
- 2. SELECTION CRITERIA:** Career: 30%, Written Test: 50%, GD and PI: 20%
- 3. DURATION OF THE COURSE :** Two Year (Four Semester)
- 4. NUMBER OF SEATS: 40**
- 5. DISTRIBUTION OF SEATS:**
Open -30, Industry Sponsored-05, Foreign Participants-05
- 6. RESERVATIONS:** As per University rules, from out of the 30 open seats.
- 7. FEE STRUCTURE:**

Category	Course Fee (Per Semester)	Seminar Fee (Per Year)	Field Work (Per Semester)
Open	Rs.12,000/-	Rs.1000/-	Rs.5000/-
Industry Sponsored	Rs.25,000/-	Rs.1000/-	Rs.5000/-
Foreign Participants	1000 USD	100 USD	200 USD

8. COURSE STRUCTURE:

Semester-I	Title of the Paper	Credit
R-101	Rural Economy and Development	3
R-102	Rural Livelihood	3
R-103	Rural Society and Societal Analysis	3
R-104	Organizational Behaviour	3
R-105	Communication and Self-Development	3
R-106	Financial Accounting	3
R-107	Social Research Methodology	3
R-108	<i>Field Work Project and Viva-I</i>	4



Semester-II		
R-201	Development Theory and Practices	3
R-202	Women and Child Development	3
R-203	Public Health and Sanitation	3
R-204	Micro Economics for Rural Managers	3
R-205	Quantitative and Statistical Methods	3
R-206	Human Resource Management	3
R-207	Financial Management	3
R-208	Summer Training Report and Viva	4
Semester-III		
R-301	Micro Finance	3
R-302	Social Entrepreneurship	3
R-303	Social Justice and Human Rights	3
R-304	Rural Governance	3
R-305	Project Planning and Management	3
R-306	Management Natural Resources	3
R-307	Disaster Management	3
R-308	Field Work Project and Viva-II	4
Semester-IV		
R-401	Public Policy Analysis	3
R-402	Management of NGOs	3
R-403	Management of Agri Business	3
R-304	Rural Marketing	3
R-405	Strategic Management	3
R-406	Management Information Systems	3
R-407	Legal Environment of Business	3
R-408	Dissertation and Viva	4

9. CORE FACULTY:

- Prof. A.K. Das Mohapatra (Dept. of Business Administration, Sambalpur University)
- Prof. P. Gahan (Dept. of Business Administration, Sambalpur University)
- Prof. B. Satpathy (Dept of Business Administration, Sambalpur University)
- Dr. P.C. Tripathy (Dept of Business Administration, Sambalpur University)
- Dr. T.K. Das (Dept of Business Administration, Sambalpur University)
- Dr. D.K. Mahalik (Dept of Business Administration, Sambalpur University)
- Mr. S. Kerketta (Dept of Business Administration, Sambalpur University)



Guest Faculty

- Prof. P.K. Tripathy (Dept. of Economics, Sambalpur University)
- Prof. S.S. Rath (Dept. of Economics, Sambalpur University)
- Dr. S. Das (Dept. of Economics, Sambalpur University)
- Mr. B. Mishra (Dept. of Economics, Sambalpur University)
- Dr. R.K. Kumbhar (Dept. of Economics, Sambalpur University)
- Prof. S. Nayak (Dept. of Sociology, Sambalpur University)
- Dr. Ratnawali (Dept of Anthropology, Sambalpur University)
- Prof. S.K. Sahu (Dept. of Environmental Science, Sambalpur University)
- Dr. S.K. Pattanayak (Dept. of Environmental Science, Sambalpur University)
- Dr. M.R. Mahananda (Dept. of Environmental Science, Sambalpur University)
- Mr. P. Dansana (Dept of Law, Sambalpur University)
- Dr. M.K. Sahu (Dept of Law, Sambalpur University)

10. OTHER SPECIAL FEATURES OF THE COURSE AND HOST DEPARTMENT:

The Course has been designed to develop and nurture talents who can steer the cause of social development.





**TEACHERS OF THE P.G. DEPARTMENTS
SAMBALPUR UNIVERSITY
HAVING SELF-FINANCING COURSES**

**Telephone No.(Office)
2432660**

ANTHROPOLOGY

Prof. D.K.Behera, M.Sc.,Ph.D.DLLPM	Professor (on lien)
Dr. Ratnawali, M.Sc., Ph.D.	Reader & Head
Mr. S.C. Murmu, M.A.	Lecturer
Mr. M. Biswal, M.A.	Lecturer (contractual)
Ms. S. Samal, M.A.	Lecturer (contractual)
Ms. B. Meher, M.A.	Lecturer (Contractual)

2431116, 243201

BUSINESS ADMINISTRATION

Prof. B.Satpathy, M.Sc.(Engg.),Ph.D., D.Sc. (Management)	Professor
Prof.(Mrs) P.Gahan, M.Com, M.Phil, Ph.D., FDPM(IIM-A)	Professor
Prof. A.K.Das Mahapatra, M.Com,M.Phil,LL.B, Ph.D.,FDPM(IIM-A)	Professor & Head
Dr. P.C.Tripathy, M.Com.,M.Phil, MBA, Ph.D.	Reader
Dr. T.K.Das, M.A.,M.Phil, Ph.D.	Lecturer (Sr. Scale)
Sri D.K.Mahalik, B.E., MBA	Lecturer (Sr. Scale)
Sri S.Kerketta, MBA (on study leave)	Lecturer

2430114

CHEMISTRY

Prof. A.K.Panda, M.Sc.,Ph.D.	Professor (UGC-BSR Faculty Fellow)
Prof. (Mrs.) P.K.Misra, M.Sc.,M.Phil, Ph.D.	Professor & Head
Dr. P.K.Behera, M.Sc., M.Phil , Ph.D.	Reader
Dr. A.K.Behera, M.Sc.,M.Phil, Ph.D.	Reader
Dr. A.Mohapatra, M.Sc., M.Phil, Ph.D.	Reader
Dr. S.N. Sahu, M.Sc., M.Tech., Ph.D.	Lecturer
Dr. B.N. Patra, M.Sc., M.Phil., Ph.D.	Lecturer
Dr. N.K. Behera, M.Sc., Ph.D.	Lecturer
Dr. R.N. Mahaling, M.Sc., M.Tech., Ph.D.	Lecturer

2430325

EARTH SCIENCES

Dr. J.K. Tripathy, M.Sc., Ph.D.	Reader & Head
Mr. D. Behera, M.Sc., M.Phil., P.G. Dip. in RS&GIS	Lecturer
Dr.(Mrs.) N. Mahanta, M.Sc., M.Phil., Ph.D., P.G. Dip. in RS&GIS	Lecturer

ECONOMICS

2431548

Prof. P.K.Tripathy, M.A.,Ph.D.	Professor
Prof. S.S.Rath, M.A.,Ph.D.	Professor
Dr.(Mrs) S. Das, M.A.,Ph.D.	Reader & Head
Sri B.Mishra, M.A.	Reader
Dr. R.K. Kumbhar, M.A., Ph.D.	Lecturer



ENVIRONMENTAL SCIENCES

2431033

Prof. S.K.Sahu, M.Sc.,M.Phil, Ph.D.

Professor

Dr. S.K. Pattanayak, M.Sc., Ph.D.

Reader & Head

Dr. M.R. Mahananda, M.Sc.,M.Phil,Ph.D.

Lecturer

Dr.(Mrs.) R. Panda

Lecturer (contractual)

Mr. A.K. Bhadra

Lecturer (contractual)

HOME SCIENCE

2432258

Prof. (Mrs) B.K.Mishra, M.A.,Ph.D.

Professor

Prof. (Mrs) B.Panda, M.A., Ph.D

Professor & Head

SCHOOL OF LIFE SCIENCES

2431752

Dr (Mrs.) B.Nayak, M.Sc.,M.Phil, Ph.D.

Reader & Head

Dr. E.Kariali, M.Sc.,M.Phil, Ph.D.

Reader

Dr. J. Panigrahi, M.Sc., Ph.D.

Reader

Dr. R.K. Behera, M.Sc., M.Phil., Ph.D.

Reader

Dr. S.P.Mishra, M.Sc.,Ph.D.

Lecturer (Sr.Scale)

Dr.(Mrs) S.Sahu, M.Sc.,Ph.D.

Lecturer

Dr. J. Rath, M.Sc., Ph.D.

Lecturer

Dr.(Mrs.) S. Pattnaik, M.Sc., Ph.D.

Lecturer

Dr. A.K. Patel, M.Sc., M.Phil., M.Tech, Ph.D.

Reader

Dr.(Mrs.) A. Pattnaik, M.Sc., Ph.D.

Lecturer

POLITICAL SCIENCE & PUBLIC ADMINISTRATION

2431623

Smt. S. Mishra, M.A., M.Phil

Reader

Dr. (Mrs) J. Xaxa, M.A.,M.Phil, Ph.D.

Reader

Dr. S.P. Dash, M.A., Ph.D.

Reader & Head

Dr. S.C.Patel, M.A.,M.Phil.,Ph.D.

Lecturer

Dr. R.K. Kujur, M.A., Ph.D.

Lecturer

For any information of general nature, contact

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