

## **GOA UNIVERSITY**

(Re-accredited by NAAC with Grade B)

POSTGRADUATE STUDIES &
RESEARCH PROGRAMMES

HANDBOOK 2011-2012

## IMPORTANT DATES AT A GLANCE

Last date for submission of Application Form for Entrance Test	15/06/2011 up to 5.30 p.m.
SCHEDULE OF ENTRANCE TESTS	
Change of Faculty / Subject Test for all Faculties Candidates from other Universities (all Departments)	20/06/2011
Department of Chemistry/Electronics/MBA (FS) Between 11.00 a.m. and 2.00 p.m.	21/06/2011
Personal Interview of selected candidates at the Entrance Test MBA (FS) Between 11.00 a.m. and 5.00 p.m.	23/06/2011
Display of the First Provisional List of Admission (including the waiting list) (Afternoon)	25/06/2011
Display of the Second Provisional List of Admission (including the waiting list) (Afternoon)	30/06/2011
Last date for payment of fees by candidates in the First List	29/06/2011
Last date for payment of fees by candidates in the Second List	04/07/2011
Final List for Admission	05/07/2011
Commencement of Classes for Semester I	27/06/2011
LAST DATE FOR LATE ADMISSION TO SEMESTER I (PART I) AND FOR PAYMENT OF FEES	08/07/2011
LAST DATE FOR LATE ADMISSION TO SEMESTER III (PART II) AND FOR PAYMENT OF FEES	01/07/2011

The information contained in this Handbook is subject to changes with the revision of University Ordinances/Rules.

## **GOA UNIVERSITY**

**CHANCELLOR** 

H.E. Dr. S. S. Sidhu, Governor of Goa

VICE-CHANCELLOR

Prof. Dr. Dileep N. Deobagkar

**DEANS OF FACULTIES** 

Faculty of Languages & Literature

Prof. K. S. Bhat

Faculty of Social Sciences
Prof. A. V. Afonso

Prof. A. V. Afonso

Faculty of Natural Sciences

Prof. J. A. E. Desa

Faculty of Life Sciences & Environment

Prof. G. N. Nayak

Faculty of Commerce

Prof. B. Ramesh

Faculty of Management Studies

Prof. N. Mekoth

Faculty of Medicine

Prof. Dr. Pradeep Naik

Faculty of Engineering Dr. N. Somayaji

Faculty of Education

Dr. Louis Vernal

Faculty of Law

Prin. Dr. M. Pinheiro

Faculty of Performing, Fine Art & Music

Prin. Kamlakar Naik

Faculty of Design
Vice-Chancellor

## **ADMINISTRATION**

## REGISTRAR

Prof. V. P. Kamat

FINANCE OFFICER

Shri D. J. Naik

## CONTROLLER OF EXAMINATIONS

**DEPUTY REGISTRAR (ACADEMIC)** 

Shri G. P. Khanolkar

Shri M. Shreedhara

DEPUTY REGISTRAR (GEN. ADMN.)

Shri D. A. E. Rodrigues

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Shri. V. L. Sawkar

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Shri. M. Chakraborty

ASST. DIR. OF PHYSICAL EDN. & SPORTS

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Shri L. Macedo (Examinations)

Shri A. Fernandes (Finance)

Smt. M. Sawant (Colleges)

Shri R. R. Bhatikar (PR & Academic Coordination)

Smt. Maya Gaitonde (Teaching)

Smt S. S. Figueiredo (Examinations)

Smt S. N. Kamat Dias (PG Departments) Smt B. T. A. D'Mello e Daniel (Legal)

C1 : A 1 1 N 1 (D 1 )

Shri Ashok Nagarsekar (Purchase)

Smt. Sharayu Chari (Non-teaching)

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## **ACADEMIC CALENDAR 2011-2012**

03/6/2011	Reopening

03/06/2011	24/11/2011	Ist Term
13/06/2011		Beginning of IIIrd Semester
27/06/2011		Beginning of Ist Semester
01/09/2011	06/09/2011	Mid Term Break (Ganesh Chaturthi Break)
31/10/2011		Teaching Ends
01/11/2011	07/11/2011	Preparatory Break/Repeat exam for
		Semester II & IV
08/11/2011	18/11/2011	Exams Semester I & III
19/11/2011	24/11/2011	CAP/Result
25/11/2011	07/12/2011	Winter Break/Vacation

08/12/2011	02/05/2012	II <sup>nd</sup> Term
08/12/2011		Beginning of II <sup>nd</sup> /IV <sup>th</sup> Semester
24/12/2011	31/12/2011	Christmas Break
07/04/2012		Teaching Ends
09/04/2012	14/04/2012	Preparatory Break/Repeat exam for
		Semester I & III
16/04/2012	26/04/2012	Theory/Practicals - Exams Semester II & IV
27/04/2012	02/05/2012	CAP/Result
03/05/2012	02/06/2012	Summer Vacation

## 04/06/2012 Reopening

## 1. INTRODUCTION

Goa University is the only University in the State of Goa and one of the renowned centres for higher education in the country. The University was established in the year 1985 around the nucleus of Centre for Post Graduate Instruction and Research of the University of Bombay in Goa. Since its inception, the University has strived to set high academic standards and has strived to offer academic programmes in a wide range of conventional and contemporary areas of post graduate study and research. The University has been constantly exploring ways to make the courses relevant to the changing needs of education. Some of the courses offered under the various faculties have been designed with the objective to develop manpower to meet the specific requirements of the industrial and the services sector.

The University has also taken several initiatives to develop its infrastructure. The well-equipped laboratories, computer laboratories with Internet access, Library resources and other physical infrastructure including seminar halls, student hostels, etc. provide a vibrant learning atmosphere to the students. Equipped with one of the best student-teacher ratios, the academic ethos at the University provides a conducive atmosphere for students to acquire learning of very high standards.

In recognition of the University's efforts in fostering overall development of the quality and standard of postgraduate education and research, the National Accreditation & Assessment Council (NAAC) has reaccredited the University with Grade B with 'Good' Descriptor, for a period of five years from March, 2009.

The information contained in the Handbook has been edited by the team on the basis of inputs received from the various Departments/Sections of the University. Though care has been taken to provide information as per existing rules, the same is subject to changes with revision of the University Ordinances/Rules from time to time.

The Committee would like to thank all those who have directly or indirectly contributed in the publication of this Handbook.

Sudarsan P. K. Tilve S. G. Caldeira N. Priolkar K. R. Dias S. N. K. Bhatikar R. R.

## 2. ELIGIBILITY CRITERIA FOR ADMISSION TO POST GRADUATE COURSES

## 2.1 ELIGIBILITY CRITERIA FOR DEPARTMENTS WITHOUT ENTRANCE TEST

The eligibility criteria for admission (unless specified otherwise) to the various Post-Graduate programmes leading to the degrees of M.A./M.Sc./M.Com. are:

- 1. The candidate must pass the Bachelor's examination with a minimum of 40% marks in the respective discipline.
- 2. Admission is granted on the basis of Ordinance OB-11.6 and as per the eligibility criteria specified for the various Faculties therein.
- 3. Admission is based on the merit list prepared on the basis of marks obtained in the qualifying examination.

## ELIGIBILITY CRITERIA FOR DEPARTMENTS WITH ENTRANCE TEST

Faculty: Natural Sciences

Course: M.Sc. in Electronics

#### **Admission Criteria:**

Admission to the M.Sc. (Electronics) course is open to any student passing the B.Sc. degree examination in Physics/Computer Science/Electronics with at least 55% aggregate marks from any recognised University. Eligible candidates shall be required to appear for an entrance test, which will have 50% weightage for Goa University students, and 100% weightage for other University students.

## Course: M.Sc. in Chemistry Admission Criteria:

- (A) The merit list in the Department of Chemistry shall be prepared on the basis of the total marks computed from the aggregate marks obtained at the qualifying examination (50% weightage) and the marks obtained in the Entrance Test (50% weightage), irrespective of the number of papers offered (6 or 3) in the subject at the qualifying examination.
- (B) In case of two candidates securing equal marks in the merit list, the candidate passing the qualifying examination with only one subject (six units) for which admission is sought, will be placed above the candidate passing the qualifying examination with two major subjects (three units + three units).
- (C) In case of two candidates securing equal marks in the merit list as well as both having offered only one subject (six units) for which admission is sought, the candidates having higher marks in the qualifying examination shall be placed above the other.
- (D) In case of two candidates securing equal marks in the merit list and having passed the qualifying examination with two subjects (three units + three units), candidate securing higher marks in the subjects for which admission is sought shall be placed above the other.
- (E) In case of two candidates scoring equal marks in the merit list and having passed in qualifying examination with two subjects as well as having secured equal marks in the subject for which admission is sought, candidate securing higher aggregate marks in the qualifying examination shall be preferred.
- (F) Unclaimed seats from the Reserved Category shall be transferred to the General Category.

Note: Candidates applying for admission to the M.Sc. (Chemistry) programme shall be eligible to be admitted to only one of the three specialisations at M. Sc. (Part II)

#### Faculty: Life Sciences & Environment

#### Course: M.Sc. in Marine Science:

A candidate, for admission to M.Sc. (Marine Science) course, must have passed the examination of the Degree of Bachelor of Science of this University or an examination of any other University recognized as equivalent thereto, with at least seven units of 100 marks each in the first, second and third years taken together.

The intake capacity for M.Sc. Marine Science is 15, out of which 9 seats under reserved categories will be filled as per guidelines of Govt. of Goa. 6 general category seats will be filled in the following manner:

- a. Physical Oceanography: B.Sc. with Physics/Mathematics/Electronics/Computer Science/IT
- b. Chemical Oceanography: B.Sc. with Chemistry/Industrial Chemistry/Analytical Chemistry/Pharmaceutical Chemistry
- c. Marine Biology: B.Sc. with Botany/Zoology/Microbiology/Biotechnology/Biosciences/Fisheries/Aquatic Sciences
- d. Marine Geology: B.Sc. with Earth Sciences/Geology.

Among the 6 general category seats the first four will be allotted to Serial No. 1 in the respective specialization. Remaining two seats will be filled on the basis of merit list irrespective of specialization.

## Faculty: Commerce

#### Courses: MBA (Financial Services)

Graduates, postgraduates and professionals like CAs, ICWAs, CFAs who have completed their graduation with 50% aggregate marks at graduation from Goa University or any other recognised University in India or abroad. Graduates possessing any other degree other than B.Com./Management Degree or Diploma/ CAs/ ICWAs/ CFAs have to undergo Foundation Course in Accounting and Finance. Eligible candidates have to appear for written test/personal interview. Eligible industry-sponsored candidates, foreign candidates and professionals may directly be called for personal interview. A separate brochure with detailed information about the programme can be obtained from the Department.

#### ELIGIBILITY CRITERIA FOR DEPARTMENTS WITH NATIONAL ENTRANCE TEST

## Faculty: Life Sciences & Environment

## Course Offered: M.Sc. in Marine Biotechnology

Admission Criteria: Bachelor's degree under 10+2+3 pattern of education in Physical, Biological, Agricultural, Veterinary and Fishery Sciences, Pharmacy, Engineering/Technology, 4-years B.S.(Physician Assistant Course); OR Medicine (MBBS or BDS) with at least 55% marks.

Admissions are granted on the basis of "National Combined Biotechnology Entrance Examination" conducted by Jawaharlal Nehru University (New Delhi) at various centres.

#### **Faculty: Management Studies**

#### Course Offered:MBA

Admission Criteria: Candidate must have passed the Bachelor's Degree in any discipline like Arts, Science, Commerce, Law, Business Administration, Engineering, Architecture, Medicine etc. of this University or any other University recognised as equivalent thereto. **The admissions are made on the basis of Xavier's Admission Test (XAT) conducted by XLRI at various centres.** One seat is reserved for candidate from the Armed Forces nominated by Army HQ. A separate brochure with detailed information about the programme can be obtained from the Department.

#### Faculty: Natural Sciences

#### Course Offered: MCA

Admission Criteria: First year of the MCA course is open to any candidate passing the Bachelor's Degree in Arts, Science, Commerce, Law, Business Administration, Engineering or Architecture of this University securing at least 55% marks in the aggregate of this University (3 year integrated course or old course) or an examination of another University recognised as equivalent thereto. Admission to the course is based on all India entrance test conducted by C-DAC, Mumbai. A separate brochure with detailed information about the programme can be obtained from the Department.

Various other Post Graduate courses such as LL.M., M.Pharm., M.S., M.D., M.D.S., M.E., M.H.S. and other Post Graduate Diplomas are offered by the University through its affiliated colleges/institutes. A list of these colleges/institutes is given in this Handbook under Section 10. Students may approach the respective colleges/institutions for their Handbook.

## 2.2 RESERVATION UNDER VARIOUS CATEGORIES

As per the revised guidelines of the UGC, reservation of seats in case of Scheduled Caste (SC) and Scheduled Tribe (ST) candidates for admission to various courses of study in the University is on the basis of the reservation policy of the State Government.

- 2% seats in each of the Post Graduate courses of study, subject to a minimum of one seat, shall be reserved for candidates belonging to SC category.
- 12% of seats in each of the Post Graduate courses of study, subject to a minimum of one seat, shall be reserved for candidates belonging to ST category. Candidates applying for admission under these categories shall be required to submit a certificate to that effect issued by the officer of the rank of the Deputy Collector or above.
- 19.5% of total seats, subject to a minimum of two seats, for admission to various courses of study, shall be reserved for candidates belonging to other backward classes (OBC) of the State of Goa as per the directives of the State Government. Candidates applying under this category shall be required to submit a certificate issued to that effect by the officer of the rank of the Mamlatdar or above.
  - Seats falling vacant under any of the above reserved categories shall be filled from the general category candidates with the approval of the Vice-Chancellor.
- 10% of seats, subject to a maximum of two seats and a minimum of one seat in each course of study, except the MCA & MBA courses of study, shall be made available for candidates of other Universities. For MCA & MBA this reservation will be 20%. Entrance Test shall be conducted by all Departments for admission to candidates from other Universities. Only those candidates who secure 40% or more marks in the Entrance Test shall be eligible for admission under this category.
- 15% of seats, over and above the allotted number of seats, shall be reserved as supernumerary seats for the overseas candidates, who are eligible for admission and are recommended by Govt. of India under scholarship from Govt. of India or under exchange programme (ICCR Programme). These seats shall be filled in accordance with the UGC guidelines. Out of the 15% supernumerary seats, one seat in each program will be reserved for Kashmiri Migrants (KM) as per directives of the UGC.

(Note: Percentage of seats mentioned above is subject to changes depending upon State Govt. directives).

#### Admission to Candidates with more than one attempt.

Candidates passing the qualifying examination in more than one attempt will be deemed eligible for admission, but for the purpose of equating their performance with that of candidates passing the examination at first attempt, the percentage of marks (aggregate) obtained by them shall be deemed to be less by 3% for every subsequent attempt than the actual percentage of marks obtained by them at the qualifying examination.

## Note: For the attention of candidates from other Universities seeking admission to the above courses:

Candidates should have eligibility to study Post-Graduate courses like M.A. / M.Sc. / M.Com / MCA /
MBA in their respective branches.
Candidates should fulfil minimum percentage of marks and pass grade as above in their qualifying
evaminations

Candidates fulfilling the above two conditions will have to answer an **Entrance Test** at Goa University.

## 2.3 MINIMUM NUMBER OF STUDENTS FOR POST GRADUATE CLASSES

If the number of candidates selected for admission to any Post Graduate course at the entry level, i.e., the First Year, is less than five, the University reserves the right to suspend admission of students to that class for the particular academic year.

#### 2.4 MERIT LIST IN THE DEPARTMENTS

The merit list in the Departments of the various Faculties, except where entrance test is conducted, shall be prepared in the following order/manner:

Candidates securing distinction in the qualifying examination with six units shall be placed above those securing distinction with three units.

Candidates securing first class with six units shall be placed above those securing first class with three units.

Candidates securing second class with six units shall be placed above those securing second class with three units, and

Candidates securing pass class with six units shall be placed above those securing pass class with three units.

## 2.5 CHANGE OF FACULTY / SUBJECT:

Candidates who have passed B.A. Degree examination of this University or any other recognised University in the Faculty of Languages and Social Sciences and secured at least 40% of the aggregate marks may seek admission to the M.A. Degree course in a subject in which they have not obtained the Bachelor's degree with minimum three units. Similarly, candidates passing the Bachelor's Degree of this University or of any other recognised University in a Faculty other than the Faculty of Languages and Social Sciences with at least 40% of the aggregate marks may also seek admission to the M.A. degree course of study of this University. Both the types of candidates will have to apply to the Registrar (in the prescribed form) before the closing date as specified by the Department for such change of subject or faculty.

A written test consisting of two papers as under will be held in the subject in which the candidate desires to be admitted under this scheme of change of faculty / subject for admission to the M.A. degree course.

i) An essay paper in the subject concerned (One hour duration) 100 Marks

ii) An objective type paper to test the candidate's general acquaintance with the subject concerned (One hour duration) 100 Marks

A fee of Rs. 250=00 will be charged for the test from each student.

Candidates securing at least 40% marks in each of the above papers will be considered eligible for admission to the M.A. degree course in the subject, in order of merit against the vacant seats available after students from the merit list are given admission.

## 2.6 NUMBER OF SEATS AVAILABLE IN EACH SUBJECT AND RESERVATIONS

- \* Subject to change as per the directives of Government.
- + Number of reserved seats in each category for these courses is given in their respective prospectus.

Sr.	P.G. Courses	Total No. of Seats	SC*	ST*	OBC*	Differently abled*	Other Indian Universities
1.	Faculty of Language and Literature (MA)						
a.	English	25	1	3	5	1	2
b.	French	10	1	1	2	1	1
C.	Hindi	25	1	3	5	1	2
d.	Konkani	25	1	3	5	1	2
e.	Marathi	15	1	2	3	1	2
f.	Portuguese	-					
II.	Faculty of Social Sciences (MA)						
a.	Economics	30	1	4	6	1	2
b.	History	25	1	3	5	1	2
C.	Philosophy	10	1	1	2	1	1
d.	Political Science	25	1	3	5	1	2
e.	Sociology	15	1	2	3	1	2
f.	International Studies	10	1	1	2	1	1
III.	Faculty of Natural Sciences (M.Sc.)	1.5	<u> </u>	+	<del>  -</del>	1	
a.	Chemistry	36	1	4	7	1	2
b.	Electronics	15	1	2	3	1	2
C.	Earth Science	15	1	2	3	1	2
d.	Mathematics	20	1	2	4	1	2
e.	Physics	25	1	3	5	1	2
IV.	Faculty of Life Sciences & Environment (M.Sc.)						
a.	Botany	15	1	2	3	1	2
b.	Marine Science	15	1	2	3	1	2
C.	Marine Biotechnology	20	3	2	-	1	National Admission
d.	Microbiology	15	1	2	3	1	2
e.	Zoology	15	1	2	3	1	2
V.	M.C.A. +	30+					
VI.	M.Com.	40	1	5	8	1	2
VII	MBA (FINANCIAL SERVICES)+	25+					
VIII	MBA+	60+					
IX	M.Phil.	10	1	1	2	1	National Admission
a.	Marine Zoology	05	1	1	1	1	1
b.	Latin American Studies	05	İ				
Χ.	P. G. Diploma						
a.	Applied Plant Sciences	10	1	1	2	1	1
b.	Clinical Genetics & Medical Lab. Techniques	15	1	2	3	1	2
C.	Marine Microbiology & Technology	10	1	1	2	1	1
XI.	Ph. D.	No Specific	ed ceilin	g streng			

<sup>15 %</sup> supernumerary seats are available for foreign students out of which 5% seats are earmarked for children of Indian workers in Gulf and one seat in each program is reserved for Kashmiri Migrants.

Reservation in admission to differently abled students and children of defence personnel is available as per Government guidelines.

Reservation Percentage of SC –2%, ST-12%, OBC- 19.5%, Differently abled-3% (As per State Government directives)

For National Admission programmes, the reservation percentage is as per Central Government rules.

#### Master of Business Administration (MBA) Course

Each subject or component of evaluation is split into certain number of units. The number of units will be approximately the number of minimum contact hours divided by 10. The teacher teaching the subject, with the consent of the Departmental Council, will decide the method as well as the content of evaluation of each unit of each subject.

Competencies with respective grades will be given in the detailed Grade Sheet that will be issued at the end of the Program.

The teacher will submit at the end of every month, the details of the Grades awarded to each student as well as the percent of attendance till that point of time to enable the student to benefit from timely feedback.

No component of evaluation shall exceed 40% weight in the total evaluation of the subjects.

The method as well as the content of evaluation of each credit of Internships such as the Internship Report, Internship Seminar, Project Courses and Courses of Independent Study will be decided by the concerned guide with the consent of the Department Council. The respective teacher or the guide will do the assessment as well as grading.

All Seminars will be organised as public seminars, where anybody from the audience can ask questions, unless the organisation on which the work was done requires the results to be kept confidential. In the latter case only the examiners will be present during the seminar.

All examinations will be open book examinations. The prescribed text distributed to the students as well as other hand written notes of the student can be used by the student while answering the examinations. After evaluation, each student will be graded for each subject, as per the following scheme of grades and grade points.

#### Grade

A:	Excellent	8.00 upwards
B:	Good	6  to < 8
C:	Satisfactory	5.5  to < 6
D:	Low Pass	5  to < 5.5
F:	Failed	0  to < 5.

Teachers will use the following grades (and not grade points) with equivalent grade points for individual components of evaluation:

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A+: 10; A: 9; A-:8; B+:7.5; B:6.75; B-:6; C+:5.9; C:5.7; C-:5.5, D:5; F:0
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The grade points awarded for a subject will be rounded off to two decimals for determining grades for the subject.

#### ORDINANCE OB-10A FOR CREDIT-BASED MASTERS DEGREE PROGRAMMES

**OB-10A.4** The instructional scheme for M.A., M.Sc., M.Com. Degree programmes is based on a system of time-integrated units called credits. Every programme shall have not more than 40 credits of Compulsory Courses and adequate number of Optional Courses approved by Board of Studies in the concerned subjects.

**OB-10A.4.1** One (1) Credit (Theory) shall be equivalent to 15 clock hours of contact teaching i.e. 1 Credit course shall be equal to one clock hour of teaching per week for a maximum of 15 weeks.

**OB-10A.4.2** One (1) Credit (Practicals) shall be equivalent to 45 clock hours of contact teaching; for example 15 practicals of 3 clock hours duration each or 9 practicals of 5 hours duration each.

**OB-10A.4.3** A student shall be eligible for the award of Master's Degree on successful completion of 80 Credits. A student is permitted to obtain additional credits. The degree/final grade shall be awarded/computed based on his/her best performance in the minimum number of credits required for the award of the Masters degree. Additional credits, if any, shall be depicted in the final transcript/mark sheet.

**OB-10A.4.6** A student must obtain 60 credits from the parent Department (i.e. specific degree for which the student is registered) and not more than 40 credits shall be from the Compulsory Courses offered by the parent Department. The remaining 20 credits may be earned by the student by opting for courses either from the parent Department or from any other Department of the University. These courses shall be referred to as Optional Courses.

**OB-10A.4.7** The 20 credits of Optional Course may also be opted from other Universities/recognized Research Institutes in India and abroad on fulfilling the pre-requisite conditions/academic modalities as prescribed and approved by the joint Board of Studies/Departmental Council or equivalent academic body of the concerned universities.

**OB-10A.4.8** Permission to transfer credits may be allowed on a case to case basis, only in the case of institutions outside the Goa University following the credit recognition procedure. Such courses, when opted for by the students of a Department, may be approved provisionally by the Departmental Council and placed for ratification before the Board of Studies at its subsequent meeting.

**OB-10A.4.11** The courses shall consist of 6, 5, 4, 3, 2, or 1 Credit/s, both theory and practicals/laboratory courses.

**OB-10A.5** The Departmental Council shall be responsible for the proper implementation and conduct of the Credit-based Masters Degree Programme/s.

**OB-10A.6** The assessment of all courses shall comprise continuous Intra-semester Assessment (ISA) and Semester-end Assessment (SEA) and shall be fully internal.

**OB-10A.6.2** The Continuous Assessment shall be in the form of a test which may be Written/Oral, Scheduled/Surprise. The nature of the assessment/test may be objective/multiple-choice, short-answer-type, essay-type, seminar, assignment, experimental-work, field-work, viva-voce or as prescribed by the Board of Studies/Departmental Council. All assessments/tests/examination papers for the continuous assessment shall have no internal choice in a question paper. It shall be ensured that module/s of the syllabus taught is/are reflected in the question paper and there is a rational distribution of marks vis-à-vis the teaching time of the module/s.

**OB-10A.6.3** A course shall have a 'single passing-head' based on the combined performance at the continuous ISA and SEA. Fractional marks shall be rounded off to the nearest integer only at the time of calculating the course grade.

**OB-10A.7** Dissertation is optional. In case of the faculty of Social Sciences and the faculty of Languages and Literature, the dissertation shall carry 12 credits; for all other faculties it shall carry 8 credits. The Dissertation shall be spread over third/fourth semester/s and not constitute an entire Semester-equivalent of Credits.

**OB-10A.7.10** To pass in the dissertation a student has to secure a minimum of C+ Grade.

**OB-10A.7.11** A student who fails in the dissertation may be allowed to re-submit the dissertation after incorporating suitable modifications under the guidance of the teacher. If the student still fails resubmission, she/he may be permitted to opt for optional course equivalent to 8/12 credits, by re-registering for the courses by payment of the prescribed fee.

**OB-10A.8 Evaluation** of the courses shall be by continuous assessment. There shall be tests every week, preferably on Saturday, corresponding to the prior week/s of teaching of the given course. The minimum number of tests for a course shall be one more than the number of credits for the course. The best performance in the number of test equal to the number of credits shall be considered for the purpose of a minimum of three tests conducted for 2 Credit courses, of which the best two shall be considered, or five tests for 4 Credit courses of which the best four shall be considered, for computing the internal assessment performance. Additional tests, if required, may be conducted by the instructor/teacher. All internal assessments shall be completed before the commencement of the SEA.

**OB-10A.8.4** A one-credit course shall carry 25 marks. All other courses shall carry marks proportionate to the number of credits.

**OB-10A.8.5** The weightage of marks for the continuous ISA and SEA in both theory and practical courses shall be 50 percent marks.

**OB-10A.8.9** Suggested model for the SEA in case of 4 credit course may consist of:

- a. A comprehensive written test, or
- b. A comprehensive laboratory course examination/fieldwork report assessment, or
- c. A combination of a comprehensive written test and laboratory course examination/fieldwork report assessment;

**OB-10A.8.10** The duration of all comprehensive written SEA examinations carrying 25 marks or less, shall be of one hour; SEA carrying above 25 marks and up to 50 marks, shall be of two hours; SEA carrying above 50 marks, shall be of three hours.

**OB-10A.9.1** The marks awarded in the ISA and SEA shall be added for awarding the grade for each course, as indicated in the table below.

Range of Marks scored	Grades	Grade Points
100-90	0	10
<90-80	A+	9
< 80-70	A	8
<70-60	A-	7
<60-55	B+	6
<55-50	В	5
<50-45	В-	4
<45-40	C+	3
<40	С	0

**OB-10A.9.2** Every student shall have to secure a minimum of C+ grade to pass the course.

**OB-10A.9.3** Provisions of OA 5.16 shall not be applicable to credit-based Masters Programmes.

- **OB-10A.9.4** Students who do not secure C+ grade will have to repeat the course in case of Compulsory Courses. In case of Optional Courses, a student may repeat the course or register for an alternative Optional Course to secure requisite number of Credits.
- **OB-10A.9.5** The SEA shall be conducted two weeks after the date of completion of teaching of the said course.
- **OB-10A.9.8** For each course a student securing "C" grade in the course shall not be entitled to earn any credits for that course and shall have to repeat the same course in the following semester or in the semester in which the course is offered/available, or register for an equivalent course identified by the Department by paying separate fees for each course.
- **OB-10A.9.13** If a student desires to improve his/her final grade on completion of the Masters degree programme, she/he will have to appear for the SEA Component of courses equivalent to  $1/3^{rd}$  of the total theory courses she/he had opted for, during the programme.
- **OB-10A.9.14** Students who have not completed the programme in four semesters, are permitted to re-register for additional semester/s and opt for courses, provided that these courses are available for instruction in the Department.
- **OB-10A.9.15** Students shall have to acquire minimum of 80 credits and be registered for the Masters programme for a minimum of four semesters, to be eligible for award of a degree.
- **OB-10A.11.2** Grievances of students shall be addressed to the Head of Department, and at the first instance, be placed before the Departmental Council for resolution.
- **OB-10A.11.3** If the student continues to feel aggrieved, the grievance application shall be referred to the Grievance Committee by the Departmental Council.
- **OB-10A.11.4** If the Grievance Committee finds that there is a prima facie case, it may refer the respective answer-scripts/assignments, to an expert outside the University, for which the student shall have to pay the prescribed fee. The result of such an evaluation will be final and binding.
- **OB-10A.11.5** Ordinarily, the decision of the Grievance Committee shall be communicated to the student within one month of his/her filing of the grievance.

#### ORDINANCE OB-9 GOVERNING PH. D. DEGREE

- **OB-9** Ordinance governing Ph. D. Degree (Under Section 24(1) of the Goa University Act, 1984).
- OB-9 (i) The Ph.D. degree is awarded for original work and academic attainment in a chosen field, on the basis of research investigation. The relevance of applied developmental/interdisciplinary work of innovative nature is equally recognized. The University desires that evaluation of thesis for the Ph.D. degree be conducted at the highest academic standards. The sole criterion for the award of the Ph.D. degree by the University, is the quality research work embodied in the thesis submitted by the candidate.
- (ii) A candidate desirous of seeking registration for a Ph.D. degree of this University shall have to qualify in the entrance test conducted for the purpose during the month of July/August. The number of seats for Ph.D. in respective subjects along with the name of Guides and area of research, shall be notified by the University.
- (iii) Entrance Test shall consist of two papers: one general aptitude test (on lines of UGC NET) and one to assess the subjects in which the candidate desires to take admission. The procedure for the test and exemption shall be as provided in subsections below:
  - (a) Paper-I shall be research Aptitude Test of two hours duration having objective type questions and shall carry a total of 100 marks. The paper shall cover: (1) Language competency, (2) numerical ability, and (3) logical reasoning.

- (b) Paper-II shall be of subject specific and shall be of two hours duration for 100 marks consisting of (1) multiple choice questions of 50 marks and (2) theoretical/descriptive questions for 50 marks.
- (c) Syllabus for the paper shall be notified by the University.
- (d) The Entrance test shall be followed by personal interview at respective departments.
- iv) (a) Candidates who have qualified for SET/NET/JRF examination of apex bodies such as CSIR/UGC/ICAR/ICMR/DBT etc and teacher fellow holder or M. Phil degree holder shall be exempted from appearing for the entrance test of this University. They shall be eligible for personal interview of the concerned department. (b) Foreign students are exempted from entrance test. They shall have to appear for personal interview of the concerned department.
- (v) Application for inter-disciplinary and for change of subject including international students shall be considered on the basis of their proven ability and results of entrance test followed by personal interview in the department in which registration is sought.
- (vii) The admission to the candidates to Ph.D. programme shall be as per State/National reservation policy.
- (viii) A candidate from another University seeking registration for research degree in this University shall obtain a provisional statement of eligibility from this University by applying for the same in the prescribed form and paying the prescribed fee. A provisional statement of eligibility may be issued to the candidate if found prima-facie eligible for registration, in a particular year.
- (ix) A list of teachers recognized by the University as guides for Ph.D degree in various subjects together with the name of the University Department/Affiliated Colleges/Recognized Institutions to which they are attached shall be available for reference in the University Office.
- (x) Ordinarily, every research scholar shall have to reside within the territorial jurisdiction of Goa University from the date of registration for a minimum period of two years.
- (xi) In special cases, on the recommendation of the guiding teacher/s and on the approval of the Dean of the concerned Faculty, the Vice-Chancellor may permit the student to reside outside the territorial jurisdiction of Goa University for the conduct of research work. However, such students shall be required to spend at least one year for research at the University department/recognized place of research.

#### **OB-9.2** Eligibility

- (i) A candidate who has obtained a Master's degree by papers securing at least second class with a minimum of 55% marks (5% relaxation for SC/ST/PD/VH Candidates) or equivalent grade and/or by research from Goa University or from any other University recognized by Goa University is eligible to register for the Ph.D. degree.
- (ii) Candidates who have passed the professional examinations conducted by the Institute of Chartered Accountants of India are eligible to register for Ph.D. degree in the faculty of Commerce, subject to the conditions, that the candidate has:
  - (a) A B.Com. Degree recognized by Goa University.
  - (b) Passed the degree examination at least in the second class with 50% of aggregate marks in the first attempt.
  - (c) Passed the professional examination of the Institute of Chartered Accountants of India with at least a second class.
- (iii) The subject of research shall be that which relates to the main branch/branches of knowledge chosen by the candidate for post graduate degree. However, a candidate wishing to conduct research in a subject for an interdisciplinary character shall also be eligible for registration. In this case, the candidate shall submit an application to the guiding teacher/s for permission.

The application shall be considered by following the procedure set out under OB-9(ii) & through Section III.

#### OB-9.3 Change of Faculty/Subject

**OB-9.3.1** Candidates from faculties/subjects of Science, Commerce, Engineering, Medicine, Law etc. are eligible to register for Ph.D. in the respective faculties/subjects of Languages, Humanities and Social Sciences. The candidate who desires to register for the Ph.D. degree under the provision of change of faculty shall have to qualify in the subject specific entrance test. Similarly, candidates from various disciplines/subjects desiring to pursue research in science, commerce and management faculties shall have to qualify in subject specific entrance test and successfully clear the personal interview in the Department. A detailed report along with the bio-data of the candidate shall be submitted through the concerned Academic Section for the approval of the Vice-Chancellor in all such cases of change of faculty and/or subject.

## **OB-9.3.2 Special Eligibility**

- (i) Candidates who have Master's degree in subjects/faculties whose nomenclature does not correspond to the subjects/faculties of this University are eligible to apply for Ph.D. programme under the provision of special Eligibility. A candidate who desires to register for Ph.D. under the provision of special eligibility shall submit an application to the Registrar for permission through the University Department/Affiliated Colleges/Recognised Institution through the proposed guide and co-guide, as the case may be, under whose supervision he/she proposed to do research. The topic of research shall be finalized by the candidate in consultation with the research guide/s. A write-up of up to 1000 words incorporating the following points shall be enclosed with the application:
  - 1. Title of proposed research.
  - 2. Historical background and its present relevance.
  - 3. Research-aims and objectives
  - 4. Availability of facilities for carrying out research in the Department/Affiliated Colleges/ Recognised Institution.
- (ii) Head of department/ Affiliated Colleges/Recognised Institution shall forward the application so received to the Faculty research Committee for consideration.
  - Note: Subject Expert/s shall be nominated by the Vice-Chancellor from the panel of three names recommended by the Guide.
- (iii) The Candidate shall make an oral presentation of the proposal before the Faculty Research Committee. Faculty Research Committee shall assess the candidate's suitability to conduct research work in the proposed subject for the Ph.D. degree and their recommend the candidate for registration or otherwise.
- (vii) Research students possessing M.Phil. or equivalent degree of this University or of any other recognized University shall be exempted from the courses as specified under (vi) above. However, they shall be required to give a seminar, as in the case of other students.
- (ix) No research scholar shall join any course of study leading to a degree other than connected with the Ph.D. programme or appear for any other examination conducted by the Goa University or any other University during the entire period of Ph.D. registration or until the submission of Ph.D. Thesis.

## OB-9.5 Period

(i) Full-time research scholars shall have to conduct research for a minimum period of four terms (2 years). The candidate shall have to submit the thesis in eight terms (4years). However, the Faculty Research committee may recommend extension of registration of the candidate to the Vice-Chancellor by maximum period of four terms; two terms at a time, provided the research scholar applies for the same giving reasons through his/her guide/s. The registration of a research scholar, who is not able to submit the thesis within 12 terms from the date of registration, shall stand terminated and, the candidate shall have to apply for registration afresh. However, under exceptional circumstances, the vice-chancellor on the recommendation of the

Faculty Research Committee may grant a maximum extension of three months to submit the thesis.

#### OB-9.8 Scale of Fee

All the fees to be paid by the research scholar towards the Ph.D. programme shall be as per the relevant Ordinances/Notification issued by the University from time to time.

#### OB-9.9 Examination

- (i) A candidate shall publish at least one research paper in referred journal before submission of the thesis. Evidence for the same in the form of acceptance letter or off-prints/re-prints shall be submitted along with the thesis.
- (ii) The Research student/scholar shall have to give a pre-Synopsis seminar before finalizing the synopsis. All the members of Faculty Research Committee and the members of Departmental Council/Faculty of Institution shall be invited for the seminar. If the Faculty Research committee finds the work carried out is adequate for the award of Ph.d. degree, than the student shall be permitted to submit the synopsis. The presynopsis seminar presentation may coincide with the annual presentation.
- (iii) Before submission of the thesis the research student/scholar shall submit to the Controller of Examination through his guide statement giving the title and synopsis (with bibliography) along with the prescribed fee.
- (iv) The Research student/scholar shall submit four copies of thesis within six months after submission of the synopsis. The period of six months shall be within the overall registration period of twelve terms (six years). If a candidate is unable to submit the theisi during the prescribed period he/she shall have to seek pemission from the Vice-chancellor as per OB 9.5 above. If the research scholar is unable to submit the thesis within the prescribed period he/she shall have to submit fresh synopsis.

The four copies of the thesis type-written or printed shall embody the result of his research and state whether the work is based on the discovery of new facts by him or of new relations of facts observed by others and how the work contributes to the general advancement of knowledge. The students shall forward a statement indicating the sources from which his information has been derived and the extent to which he has based it on the work of others and shall indicate which portion or portions of the thesis.

FEE STRUCTURE

#### **REFUND OF TUITION FEES**

- 1. In the event of a student withdrawing admission before the commencement of the course, the waitlisted candidate will be granted admission against the vacant seat. The entire fee collected from the student, after a deduction of the processing fee of not more than Rs. 1000/- (one thousand only) shall be refunded by the Institution/University to the student withdrawing from the programme.
- 2. If the student leaves after joining the course and if the seat consequently falling vacant has been filled by another candidate by the last date of admission, the Institution shall return the fee collected with proportionate deductions of monthly fee and proportionate hostel rent, where applicable.
- 3. No refund of fee is admissible if the student withdraws admission on the last date or later. Above rule is applicable to all items of fee except refundable deposits.
- 4. Students who have already been admitted to a Department/Centre of the University and have paid the fee and are subsequently admitted to another Department/Centre on or before the last date of admission will have to pay the fee for the final admission and claim refund of fee paid earlier.

All other cases of refund of fees will be decided on a case to case basis, based on its merits.

## POST- GRADUATE DEPARTMENTS

Department of English	Courses Offered	Intake	Fees (Rs.)
Established: 1965(CPIR)	M. A.	25	4400.00
Code: EG	Ph. D.		7700.00

The Department offers postgraduate course in English and also offers opportunities for doctoral research leading to Ph.D. in English. Literature is a major thrust area of the Department with emphasis on British, Indian, American and other literatures. Comparative Literature and Cultural Studies are new areas of study for the Department.

## Head of Department: Bhat K. S.

List of Faculty & Specialisation

## **Professor**

Bhat, K. S., Ph. D. (Mangalore University) (Literary Theory, Critical Theory & Cultural Studies).

#### **Associate Professors**

Budkuley, K. J., Ph. D. (Goa University) (British Poetry, Culture & Gender Studies, Indian Literature and Novel).

**Caldeira, N.,** Ph. D. (Goa University) (Goa Cultural Studies, Post-Colonial Literature, Linguistics and American Literature).

Fernandes, A. R., Ph. D. (Goa University), (Novel, Linguistics, Commonwealth Literature and Language Laboratory).

# Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSOR	Y COURSES	No. of Credits
EGC101	Linguistics	4
EGC102	English Poetry	4
EGC103	English Novel	4
EGC104	English Drama	4
EGC105	Indian writing in English	4
EGC106	Novel as a Literary Form	4
EGC107	Literary Criticism	4
EGC108	Shakespeare: Plays	4
EGC109	American Literature	4
EGC110	World Classics	4
EGC111	Comedy	4
EGC112	Epic	4
EGC113	Tragedy	4
OPTIONAL CO	DURSES	
EGO101	Stylistics	4
EGO102	Study of a Major Poet	4
EGO103	Study of a Major Novelist: Joseph Conrad	4
EGO104	Study of a Major Dramatist: Harold Pinter	4
EGO105	Indian Writing in Translation	4

EGO106	Readings in Literary Criticism	4
EGO107	Creative Writing	4
EGO108	Commonwealth Literature	4
EGO109	Studies in Colonialism, Modernity and Indigenous Discourse	4
EGO110	Latin American Literature	4
EGO111	Cultural Studies in the Post Colonial World	4
EGO112	Readings in Contemporary Theory	4
EGO113	A Reading in Post-Colonial Theories and Literatures	4
EGO114	Cultural Studies: Theory and Practice	4
EGO115	GOA: Cultural Perspectives	4
EGO116	Contemporary Indian English Fiction	4
EGO117	Regional Sensibilities in Indian Writing	4
EGO118	Cross-Currents in Modern European Drama	4
EGO119	Canadian Cultural Studies	4
EGO120	Translation Studies: Theory and Praxis	4
EGO121	Approaches to Journalism from Language and Literature	4
EGO122	D. H. Lawrence as a Novelist	4
EGO123	Multimedia in Cultural Literacies: A Study of Australia	4

Department of French	Courses Offered	Intake	Fee (Rs.)
and Francophone Studies	M. A.	10	4400.00
Established: 1965 (CPIR)	Ph. D.		7700.00
Code: FR	Certificate/Diploma		1500.00

The Department offers postgraduate courses in French. The Master's degree of the Department is professionally oriented and opens up opportunities for research. The Department also trains students for teaching, translation and careers in the corporate sector.

## Head of Department: Wagle A.

List of Faculty & Specialisation

## **Associate Professors**

Melo Furtado, E., Ph.D. (Goa University) (French and Francophone Literature/Culture Studies).

Wagle, A., Ph.D. (JNU, New Delhi) (Translation Studies/Linguistics/Methodology of Teaching French).

# Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY COURSES		No. of Credits
FRC101	Language Skills	4
FRC102	Theory and Practice of Translation	4
FRC103	Textual analysis	4
FRC104	Study of French Novel	4
FRC105	Francophone Studies	4
FRC106	French Culture and Civilization	4
FRC107	General Linguistics	4
FRC108	Phonetics Morphology and Syntax	4

OPTIONAL CO	URSES	
FRO101	A Study of French Romanticism	4
FRO102	Modern French/Francophone Literature Literary Criticism	4
FRO103	Women's Writings*	4
FRO104	Semantics and Lexicology	4
FRO105	Foreign Language Acquisition Studies	4
FRO106	Research Methodology*	4
FRO107	Comparative Literature*	4
FRO108	Colonial Encounter*	4
FRO109	Literary Movements	4
FRO110	Intellectual and Social background of one Selected Author's Epoch	4
FRO111	Lexicography & Technical Terminology	4
FRO112	Multimedia for Foreign language Acquisition*	4
FRO113	Scientific and Technical Translation	4
FRO114	Literary translation*	4
FRO115	Consecutive Interpretation	4
FRO116	French Language Level 1	4
FRO117	FRO117 French Language Level 2	
FRO118	French Language Level 3	4
FRO119	French for Tourism and Hospitality	4
FRO120	Scientific & Technical French	4
FRO121	French for Business	4
FRO122	Indian Literature in French Translation	4
FRO123	Translation/Terminology Project	2
	Literature/Culture Studies Project	2
FRO124	Film Appreciation*	2
FRO125	History of Art*	2
FRO126	Theatre and Oral expression	2
FRO127	Literature through Cinema*	2
FRO128	History of French Language	2
FRO129	Creative Writing and composition	2
FRO130	Corrective Phonetics	2
FRO131	Dissertation	8

<sup>\*</sup>May be taught in English

## **Certificate Courses in French**

- 1. French Language Courses (Level 1, 2 and 3)
- 2. Business French (Level 1 and 2)
- 3. French for Hotel and Tourism Industry (Level 1 and 2)
- 4. Course in Teaching Methodology
- 5. One year Diploma in Communication through Translation
- 6. Conversation Course.

Department of Portuguese	Courses Offered	Intake	Fee (Rs.)
Established: 1987	M.A.	20	4400.00
Code: PR	PG Diploma	20	3000.00
	<b>Proficiency Course</b>	30	3000.00
	Certificate Course I & II	30	2000.00

The Department of Portuguese, the only one of its kind in the country, offers M.A. in Portuguese Literature and Culture, and a Post-Graduate Diploma in the Culture of the Portuguese Speaking Countries (Culturas Lusófonas) as well as language courses: Certificate Course in Portuguese (Level I and Level II), Proficiency Course in Portuguese.

## Head of Department: Dean, Faculty of Languages and Literature

## List of Faculty & Specialization:

## **Assistant Professor:**

**Barreto, Maria. C.,** M.A. in Portuguese (Goa University) and M.A. in French & Portuguese (Bombay University) (Portuguese Language and History of Portuguese Literature)

**D'Lima, Monica Marise N.**, MSc. Physicology (Bombay University) 1976, M.A. in French (Goa University) 2006, and M.A. in Portuguese (Goa University) 2008.

## Visiting Lecturer (Instituto Camões)

**Da Silva, Delfim.C.** M.A. in Portuguese and French Studies (University of Aveiro) and M.Phil. in Interdisciplinary Portuguese Studies (Open University of Lisbon).

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSOR	Y COURSES	No. of Credits
PRC 101	Introduction to Literary Studies	4
PRC 102	History of Portuguese Literature I	4
PRC 103	History of Portuguese Literature II	4
PRC 104	History of Portuguese Language	4
PRC 105	Introduction to Portuguese Linguistics	4
PRC 106	Introduction to Portuguese Culture	4
PRC 107	Portuguese Literature I (Poetry I)	4
PRC 108	Portuguese Literature III	4
PRC 109	(Poetry II)Portuguese Literature II (Prose I)	4
PRC 110	Portuguese Literature IV (Prose II)	4
OPTIONAL C	OURSES	No. of Credits
PRO 101	History of Portuguese Theatre	4
PRO 102	Portuguese Cinema (in English)	2
PRO 103	Portuguese Art	2
PRO 104	Portuguese Literature of Voyages	4
PRO 105	Brazilian Literature	4
PRO 106	Indo-Portuguese Literature	4
PRO 107	African Literature in Portuguese	4
PRO 108	Translation and Interpretation	4
PRO 109	Methodology of Teaching Portuguese as Foreign Language	4
PRO 110	History of Portugal	4
PRO 111	Portuguese Overseas Expansion (in English)	2
PRO 112	Portugal in the Context of the European Union (in English)	2
PRO 113	Epics in Portuguese Literature	2

PRO 114	Functional Portuguese	2
PRO 115	Dissertation	8
PRO 116	Portuguese Language level I*	3
PRO 216	Portuguese Language level II*	3
PRO 316	Portuguese Language level III*	3
PRO 416	Portuguese Language level IV*	3

## All Compulsory Courses are taught in Portuguese

Dissertation (PRD) equivalent to one optional course is optional.

Language laboratory facility is also available.

Department of Hindi	Courses Offered	Intake	Fee ( Rs.)
Established: 1985	M.A.	25	4400.00
Established: 1985 Code: HN	Ph.D		7700.00

The Department offers M.A. and Ph.D. courses in Hindi. It lays emphasis on Comparative Literature, Hindi & Konkani, Medieval & Modern Poetry, Novels, Fiction, Criticism, Journalism & Mass Media, Translation etc. The Department also offers opportunity to conduct research in these areas.

## Head of Department: Mishra R. N.

List of Faculty & Specialisation:

## **Professors**

**Sharma Rohitashva, B. K.,** Ph.D. (Osmania University) (Modern Poetry, Aesthetics, Comparative Studies, Contemporary Hindi Poetry, Criticism and Indian Literature).

**Mishra R. N.,** Ph.D. (Bombay University) (Medieval, Modern and Contemporary Poetry, Indian Poetics, Translation & Mass Media and Journalism).

Khan I. B., Ph.D. (Aligarh University) (History of Hindi Literature, Linguistics and Functional Hindi).

#### **Associate Professor**

Mandrekar V. S., Ph.D. (Goa University) (Short Story, Comparative Literature and Translation).

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY COURSES		No. of Credits
SEMESTER-I		
HNC 01	Linguistics	4
HNC 02	History of Hindi Literature: Adikal se Ritikar tak	4
HNC 03	History of Hindi Literature: Adhunik Kal	4
HNC 04	Medieval Poetry: Practical Criticism	4
HNC 05	Indian Poetics	4
SEMESTER-II	[	
HNC06	Study of special – Author-Adnyeya	4
HNC07	Indian Literature	4

<sup>\*</sup>Portuguese Language Courses are only for students of other Departments

HNC08	Modern Poetry: Practical Criticism	4
HNC09	Critics & Criticism	4
HNC10	Drama & Theatre	4
OPTIONAL CO	OURSES	
SEMESTER-II		
HNO01	Hindi Novel	4
HNO02	Functional Hindi	4
HNO03	Marxist Approach to Literature	4
HNO04	Western Poetics	4
HNO05	Mass Media & Journalism	4
SEMESTER-IV		
HNO06	Another Form of Modern Prose	4
HNO07	Contemporary Hindi Poetry	4
HNO08	Translation	4
HNO09	Hindi Kahani	4
HNO10	A –Hindi Language Script & Grammar	2
	B –Social Work	2
or		
HNO11	Ideology, Philosophy & Literature	4
HNO12	Folk Literature	4
HNO13	Comparative Literature	4
HNO14	A-General Knowledge of Sanskrit Language & Literature	2
	B-History of Konkani Literature	2

Dissertation (HND) equivalent of two optional courses (optional).

Language laboratory facility is also available.

Department of Konkani	Courses Offered	Intake	Fee (Rs.)
Established: 1987	M.A.	25	4400.00
Code: KK	Ph.D		7700.00

Department of Konkani, the only one of its kind in the country, offers M.A. in Konkani language and literature, and has research programmes leading to Ph.D. in any area pertaining to Konkani language, literature and culture. It also has various projects from Sahitya Academi, NCERT, UGC, CIIL and other bodies taken up by individual staff members who also have expertise in several Indian and foreign languages and translation.

## Head of Department: Tadkodkar, P. S.

List of Faculty & Specialisation

## **Associate Professors**

**Tadkodkar, P. S., M.A.** (Bombay University) (Drama, Modern Konkani Prose and Poetry, Literary Criticism & Research Methodology)

**Sardesai, M., Ph.D.** (Goa University) (General Linguistics, Sociolinguistics, Works of Shennoi Goenbab & Translation Studies).

## **Assistant Professor**

**Parienkar, P., M.A.** (Goa University) (Old Konkani Literature; Folklore, Feminist Literature, Sociological Study of Literature)

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY COURSES (SEMESTER I)		No. of Credits
KKC-101	Linguistic Study of Konkani	4
KKC-102	Study of Old Konkani Literature(16th-17th Century)	4
KKC-103	Indian Poetics	4
KKC-104	Indian Literature	4
KKC-105	Special Study of the Writings of Shennoi Goenbab	4
OPTIONAL C	COURSES (SEMESTER II)	
KKO-201	Konkani Media	2
KKO-202	Film Study	2
KKO-204	Research Methodology	4
KKO-205	Translation: Theory and Practice	4
KKO-206	Feminist Literature	4
KKO-207	Konkani Literature from Kerala	2
KKO-208	Konkani Literature from Karnataka	2
COMPULSOR	Y COURSES (SEMESTER III)	
KKC-301	Modern Konkani Prose	4
KKC-302	Issues in Language Contact and Multilingualism	4
KKC-303	Sociological Study of Literature	4
KKC-304	Western Poetics	4
KKC-305	Special Study of Konkani Novels	4
OPTIONAL C	COURSES (SEMESTER IV)	
KKO-401	Konkani Folklore	4
KKO-402	Functional Konkani with reference to	2
	Printing & Editing	
KKO-403	Literary Konkani and Makers of Literary Konkani	2
KKO-404	Modern Konkani Poetry	4
KKO-405	Creative Writing	2
KKO-406	Prosody and Poetics in Poetry	2
KKO-407	Konkani Tiatro	2
KKO-408	Grammin Sahitya	2
KKO-409	Critics & Criticism	4

Department of Marathi	Courses Offered	Intake	Fee ( Rs.)
Established: 1970 (CPIR)	M.A.	15	4400.00
Established: 1970 (CPIR) Code: MR	Ph.D		7700.00

The thrust areas of the Department of Marathi include Grammar and Linguistics, Theory of Literature, Modern Forms of Literature, Medieval Marathi Literature, Christian Marathi Literary Tradition of the 17th Century in Goa, Marathi Literary Tradition in Goa, Dalit Literature in Marathi, Rural & Folk Literature in Marathi.

## Head of Department: Tadkodkar, S. M.

List of Faculty & Specialisation

## **Professor**

**Tadkodkar, S. M.**, Ph.D. (Goa University) (Christian Marathi Literary Tradition of the 17th Century in Goa, Modern Forms of Literature and Literary Criticism)

## Associate Professors

Sawant, V. D., Ph.D. (Shivaji University) (Modern Forms of Literature and Literary Criticism).

Kanolkar, B. G., Ph.D. (Goa University) (Modern Forms of Literature and Folk Literature).

## Assistant Professor

Umraskar, S. S., M.A. (Goa University) (Medieval Marathi Literature, Linguistic & Modern Form of Literature).

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY COURSES		No. of Credits
MRC-101	Review of Marathi Grammar	4
MRC-102	Theory of Literature (Part – I)	4
MRC-103	Linguistics and Marathi Language	4
MRC-104	A Study of Two Medieval Marathi Texts	4
MRC-105	History of Modern Marathi Literature (Pre-Independence Period	4
	to Post 1818)	
MRC-106	Theory of Literature (Part – II)	4
MRC-107	Research of Methodologies and Techniques	4
MRC-108	History of Modern Marathi Literature (Post-Independence Period)	4
MRC-109	A Form of Literature (Travelogues in Marathi)	4
MRC-110	A Study of Modern Marathi Author (Gangadhar Gadgil)	4
OPTIONAL CO		
MRO-101	A Study of Folk Literature	4
MRO-102	Goan Marathi Literature (Post-Liberation Period)	4
MRO-103	Translation Studies: Theory and Application	4
MRO-104	Marathi Prose & Poetry- Post-Nineteen Sixty Period	4
MRO-105	Literary Criticism: Nature and its Application	4
MRO-106	Christian Marathi Literature	4
MRO-107	Autobiographies of Women in Marathi	4
MRO-108	Sociological Study of Literature	4
MRO-109	Science Fiction in Marathi	4
MRO-110	Modern Indian Literature in Translation	4
MRO-111	A Study of Dalit Literature	4
MRO-112	Creative Writing	4
MRO-113	Literary Periodicals in Marathi	4

Department of Economics	Courses Offered	Intake	Fee (Rs.)
Established: 1968 (CPIR)	M.A.	30	4400.00
Code: EC	Ph.D		7700.00

The Department of Economics offers M. A. and Ph.D. Programme in Economics. The M.A. Programme provides a strong theoretical overview with an emphasis on quantitative techniques. Students are offered a wide range of elective courses including Financial Economics, Econometrics, Environmental Economics and Human Resource Development. In the recent years the Doctoral Programme has attracted researchers in Labour Economics, International, Macro, Environmental Economics. Faculty members have a track record of Publishing, undertaking sponsored research projects and consultancy from National and International agencies. The Department also conducts seminars and training workshops as a part of its extension activities. The Department also attracts renowned Economists as visitors.

## Head of Department: Sudarsan, P. K.

List of Faculty & Specialisation

## **Associate Professors**

Noronha, S. M., Ph.D. (Bombay University) (Labour Economics and Industrial Relations, Development Economics).

Sudarsan, P. K., Ph.D. (IIT Bombay) (International Economics and Econometrics).

Mukhopadhyay, P., Ph. D. (JNU, New Delhi) (Macro Economics, Environmental Economics).

## **Assistant Professor (Temporary)**

Aiholi, M. D., M.A. (Karnataka University)(Financial Economics, Public Economics)

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSOR	Y COURSES	No. of Credits
EC101	Microeconomics – I	4
EC201	Microeconomics – II	4
EC102	Macroeconomics – I	4
EC202	Macroeconomics – II	4
EC103	Public Economics	4
EC203	Indian Public Finance	4
EC104	Development Economics	4
EC204	Growth and Development	4
OPTIONAL CO	DURSES	
EC105	International Trade and Globalisation	4
EC106	International Finance	4
EC107	Labour Economics	4
EC108	International Relations and Social Security	4
EC109	Financial Economics	4
EC110	Human Resource Development	4
EC111	Agricultural Economics	4
EC112	Agricultural Development in India	4
EC113	Mathematical Economics	4
EC114	Introduction to Statistics	4
EC214	Introduction to Econometrics	4
EC314	Advanced Econometrics	4
EC115	Environmental Economics	4
EC301	Project Paper	4
EC214D	Dissertation	8/12
EC116	Introduction to Optimisation Techniques	2
EC302	Qualitative Data Analysis	2

Department of History	Courses Offered	Intake	Fee (Rs.)
Established: 1967 (CPIR)	M.A.	25	4400.00
Code: HS	Ph.D		7700.00

The thrust areas of the Department are Indo-Portuguese History and Maritime Studies with a special focus on the History of Goa. The Department offers a wide range of optional courses on emerging and innovative areas as well as issues of current relevance, such as Oral History, Maritime History, Trade and Urbanisation in India, Tourism, Business History and Post-Colonial Goa. The Department endeavours to make the M.A. students competent in understanding historical developments at the regional, national and international levels within an interdisciplinary analytical framework. The compulsory courses deal with the foundational aspects of historical study and include three advanced level courses in Indian History, one in Asian History and one each in European and Goan History, in addition to courses on Philosophy of History and Historical Method.

## Head of Department: Kamat, P. P.

List of Faculty & Specialisation

## **Professor**

Kamat, P. P., Ph.D. (University of Bombay) (Indo-Portuguese History and Maritime Studies).

## **Associate Professors**

Bhat, N. S., Ph.D. (Mangalore University) (History of Modern India and History of South Kanara).

Rao, N., Ph.D. (Goa University) (Ancient India and Economic History of Western Coastal India).

## **Assistant Professors**

**Porobo, P. D.,** M.A. (Goa University) (Maritime History, Tourism, Goan History, Post-Colonial Studies, Intellectual History).

**Risbud, Seema S.,** Ph.D. (Goa University) (Indo-Portuguese History, Decolonisation Movements and Studies in Indian Culture and Traditions)

## Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY	COURSES	No. of
		Credits
Semester - I		
HSC-100	"Doing History": An Introduction to Historical Method	4
HSC-101	Theories of History	4
HSC-109	Aspects of Ancient Indian History (from earliest times to A. D. 1200)	4
Semester - II		
HSC-119	Aspects of State and Society in India (1200 A.D1700 A.D.)	4
HSC-120	The Making of Modern Europe	4
Semester - III		
HSC-102	Indian National Movement (1857-1947)	4
HSC-108	India and Indian Ocean: A History	4
HSC-121	Modern Europe 1789 to 1989	4
Semester – IV		
HSC-110	Issues and Debates in Goan History	4
HSC-122	Colonialism and Nationalism in Asia	4
OPTIONAL CO	URSES	
HSO-103	Themes and Issues in Heritage Tourism	4
HSO-104	Religions in Ancient India	4

HSO-105	State and Economy in India (300 to 1200 A.D.)	4
HSO-106	Movements in Modern India: Society, Caste, Identity and Ecology	4
HSO-107	Environmental History of India	4
HSO-111	Constructing Goan Identity: Themes and Issues	4
HSO-112	The Family Laws of Goa: A Gender Audit	3
HSO-113	Economic History of Medieval India	4
HSO-114	An Introduction to Archaeology	4
HSO-115	Goan Heritage: An Introduction	4
HSO-116	An Introduction to Indian Iconography	4
HSO-117	Introduction to Museology	4
HSO-118	Oral History Interviewing	1
HSO-123	History of India (1757-1857)	4
HSO-124	Oral History	4
HSO-125	Portuguese Colonialism : A History	3
HSO-126	History of the Indian Diaspora	4
HSO-127	World History in Twentieth Century and Beyond	4
HSO-128	Imperialism and Decolonization in Africa	4
HSO-130	Historiography in India	4
HSO-131	Business History of India (C. A.D. 1700-1991)	4
HSO-132	Trade and Urbanisation in India	4
OPTIONAL CO	URSES	
HSO-133	Tribal and Peasant Movements in India(1855-1951)	4
HSO-134	Debating Post-Colonial Goa	4

Courses Offered	Intake	Fee (Rs.)
M.A.	10	4400.00
Ph.D		7700.00
V	I.A.	I.A. 10

The M.A. Programme in Philosophy focuses on developing critical acumen in students with regard to philosophical problems. Hence, the adopted approach is primarily analytical. The Department offers a wide variety of optional courses, in addition to the compulsory courses. The students are required to cover eight compulsory and eight optional courses spread over four semesters. By convention, each semester will have two compulsory and two optional courses offered by the Department. To encourage interdisciplinary studies, it is open for students to opt for students to opt for a maximum of two optional courses from outside the Department for which the students have to obtain prior permission. Also, some of the enlisted optional courses have interdisciplinary components, With regard to the Doctoral programme, the eligible students but without M.Phil or its equivalent, have to do course-work before commencement of their thesis work.

## Head of Department: Afonso A. V.

List of Faculty & Specialisation

#### **Professor**

Afonso A. V., Ph.D. (University of Poona) (Philosophy of Science; Philosophy of Religion).

## **Associate Professors**

Pai Vernekar, S. D., Ph.D. (Goa University) (Applied Ethics)

**U.A.Vinaykumar,** Ph.D. (IIT Kanpur) (Indian Metaphysics; Indian Logic; Epistemology; Existentialism) (On Leave)

## **Assistant Professor**

Desai M., M.A. (Goa University) (Philosophy of Science, Analytical Philosophy).

# Scheme of Instruction (Semester System) Choice Based Credit System

COMPULSORY	COURSES	Credits
PYC-101	History of Western Philosophy	4
PYC-102	Classical Indian Philosophy	4
PYC-203	Formal Logic	4
PYC-204	Contemporary Western Philosophy	4
PYC-205	Meta-Ethics	4
PYC-206	Indian Logic or	4
PYC-209	Philosophical Logic	4
PYC-108	Contemporary Indian Philosophy	4
PYC-207	Philosophy of Mind	4
OPTIONAL CO	URSES	
PYO-301	Dissertation	12
PYO-102	Schools of Vedanta	4
PYO-103	Philosophy of Religion	4
PYO-104	Aurobindo	4
PYO-105	Philosophy of Social Sciences	4
PYO-306	Symbolic Logic	4
PYO-108	Bio-ethics	4
PYO-109	Philosophy of Science	4
PYO-210	A.J. Ayer	4
PYO-111	Human Rights	4
PYO-112	Environmental Ethics	4
PYO-113	J. Krishnamurti	4
PYO-114	Philosophy of Rajya Yoga	3
PYO-115	Philosophical Paradoxes	4
PYO-116	Philosophy of Wellness	4
PYO-117	Coping with Death	4

Department of Political Science	Courses Offered	Intake	Fee (Rs.)
Code: PS	M.A.	25	4400.00
	Ph.D		7700.00

The Department of Political Science seeks to empower students with the knowledge of both the theory and practices of Politics by relating it to the local, national and the global landscape over the two years Masters Programme. It seeks to constantly innovate teaching and learning methodologies to equip the students for a better future career. The Department has made significant contributions in the area of Decentralized Governance, South Asia, Democratic Politics and Goa's Politics. The teaching program and curriculum is regularly updated and reflects the core competencies of the faculty members.

## Teacher Incharge: Tripathi R.

List of Faculty & Specialisation

## **Assistant Professors**

Tripathi, R., Ph.D. (JNU) (South Asian Politics, International Political Economy, Human Rights).

Desai, P., Ph.D. (JNU) (West Asian Studies, Political Theory).

Shringare, A., Ph. D. (Karnatak University) (Gender, Governance)

## **Scheme of Instruction (Semester System)**

## Choice based Credit System

COMPILIC	CODY COLIDERS	C 11:
	SORY COURSES	Credits
PS101	Political Theory: Concepts and Perspectives	4
PS102	International Relations	4
PS103	Public Administration & Policy Analysis	4
PS104	Political Economy of India	4
PS105	Modern Indian Political Thought	4
PS106	Constitutional Government in India	4
PS107	Government and Politics of South Asia	4
PS108	Democratic Politics in India: Issues and Dynamics	4
OPTIONA	L COURSES	
Theory & S	Skills Group	
PS201	Human Rights	4
PS202	Research Methods in Political Science	4
PS203	Rural Development & Research	4
PS204	Advanced Political Reporting and Analysis	4
PS205	Democracy and Federalism	4
PS206	Political Sociology	4
Dissertation		
Governance	e Group	
PS207	Development Administration & Good Governance	4
PS208	Urban Governance and Environment	4
PS209	Human Resource Development	4
PS210	State and the Marginalised	4
PS211	Political Economy of Goa	4
Internation	al Relations Group	
PS212	India's Foreign Policy	4
PS213	International Political Economy	4
PS214	Peace and Conflict Studies	4
PS215	Maritime Security in Indian Ocean	4

Department of Sociology	Courses Offered	Intake	Fee (Rs.)
Established: 1974 (CPIR)	M. A.	15	4400.00
Code: SO	Ph. D.		7700.00

The teaching programme in Sociology blends classical foundations with contemporary developments and debates. Substantively, moving beyond its disciplinary confines, the Department seeks to promote teaching and research on contemporary Goa through trans-disciplinary perspectives. At the Master's level, the Department promotes fieldwork based assignments and dissertations. Towards this end, it holds a Research Methodology Training camp. Students are encouraged to participate and present papers in national level conferences and seminars.

## Head of the Department: Somayaji G.

List of Faculty & Specialisation

#### **Professor**

Somayaji, G., Ph. D. (Goa University) (Sociology of Food, Language and Society)

#### **Associate Professor**

Siqueira, A., M. A. (Bombay University) (Sociology of Culture, Tourism and Some Issues in Goan Society).

## **Assistant Professor**

Coelho J. P., Ph. D. (Goa University) (The Indian Diaspora, Sociology of Language)

## Scheme of Instruction Choice Based Credit System

COMPULSO	RY COURSES	
Course Code	Title	No. of Credits
SOC 01	Classical Sociology	5
SOC 02	Sociology of Indian Society	5
SOC 03	Schools of Sociological Theory	5
SOC 04	Philosophy of Social Science	5
SOC 05	Current Debates in Social Theory	5
SOC 06	Political Sociology	5
SOC 07	Sociology of Religion	5
SOC 08	Globalisation and Development	5
OPTIONAL	COURSES	·
SOO 01	Producing Knowledge: Reading and writing social research	4
SOO 02	The new media: Digital story telling	2
SOO 03	Sociology of work	4
SOO 04	The Indian Diaspora	4
SOO 05	Goa and international migration	2
SOO 06	Food, Society and Culture	4
SOO 07	Language and Society	4
SOO 08	Social Movements and Revolutions	4
SOO 09	Sociology of Tribes	4
SOO 10	Goa: The local and the global	4
SOO 11	Ecology and Society	4
WS 01	Women's movement in India: Concepts, struggles, and transitions	4
WS 02	Gender Issues in Goa	4

Dissertation (SOD) equivalent to twelve credits is optional.

Centre for Latin American Studies	Courses Offered	Intake	Fee (Rs.)
Established: 1988	M. A.	15	4400.00
Code: LA	Ph. D.		7700.00
	M.Phil.		8000.00

The Centre conducts a university-based programme devoted to the study of Latin America and the Caribbean area, combining Research, Teaching, Publishing and Public Extension activities. The academic emphasis is interdisciplinary. The Centre also conducts a Masters Programme in International Studies.

## Director in Charge: Gangopadhyay, A.

List of Faculty & Specialisation:

## Associate Professor

Gangopadhyay, A. Ph. D. (JNU, New Delhi) (Latin American Political Economy and International Relations).

## **Assistant Professor**

Parulekar D., M. A. (Goa University) (International Relations and International Organisations).

**M.A.** in International Studies: The 2 year (4 Semester) Course, endeavours to acquaint students, with the theoretical, thematic and topical issues and perspectives within International Affairs. The ostensible objective through this course, is to introduce the students, through an inter-disciplinary perspective, to the nuances and intricacies of International Relations and develop their analytical faculties to dissect varied aspects, characterizing world Affairs. For details on the M. Phil and Ph.D. Programmes, kindly contact the Centre.

## Scheme of Instructions (Semester System) Choice Based Credit System

COMPULSORY COURSES		Credits
IRC01	Theories in International Relations	4
IRC02	International Relations :Concepts and Perspectives	4
IRC03	International Political Economy	4
IRC04	International Law	4
IRC05	International Organisation	4
IRC06	India's Foreign Policy	4
IRC07	US Foreign Policy in Perspective	4
IRC08	Research Methodology in International Relations	4
OPTION	NAL COURSES	
IRE01	Understanding Geopolitics	4
IRE02	Peace and Conflict Studies	4
IRE03	Latin America and the Caribbean in World Affairs	4
IRE04	Africa in World Affairs	4
IRE05	Government and Politics of South Asia	4
IRE06	Russia in World Affairs	4
IRE07	China in International Affairs	4
IRE08	Society, Politics and Foreign Policy of Brazil	4
IRE09	Politics, Society and Foreign Policy of Australia	4
IRE10	Contemporary Issues in International Relations	4
	Dissertation	8

Dept. of Chemistry	Courses Offered	Intake	Fee (Rs.)
Established: 1966 (CPIR)	M. Sc.	36	8800.00
Code: CH	Ph. D.		7700.00

## DST-FIST/UGC-SAP SPONSORED DEPARTMENT

The Department offers post graduate studies and research in Inorganic, Organic and Physical Chemistry with emphasis on synthesis of natural products, development of reagents for organic synthesis. Synthesis of pure and mixed metal oxides nanoparticles and their applications; synthesis of coordination complexes as models for biological systems; development of catalysts and their evaluations; computational and theoretical chemistry; synthesis and applications of polymers and nanocomposites.

## Head of Department: Salker, A. V.

List of Faculty and Specialisation

#### **Professors**

Fernandes, J. B., Ph.D. (Bombay University) (Electrochemistry & Catalysis)

**Kamat, S. P.,** Ph.D. (Bombay University) (Synthesis of Natural Products, Thermal Reactions, Chemical Education, Microscale Experiments in Chemistry)

Salker, A. V., Ph. D. (I.I.T. Bombay) (Catalysis, Solid State Chemistry, Chemical Sensors)

**Kamat, V. P.,** Ph.D. (Bombay University) (Organic Synthesis, Synthetic and Transformation Studies of Natural Products and Pesticide Chemistry)

Tilve, S. G., Ph.D. (University of Pune) (Synthetic Organic Chemistry)

Srinivasan, B. R., Ph.D. (I.I.T. Kanpur) (Synthetic Inorganic Chemistry)

#### **Associate Professors**

Shirsat, R. N., Ph.D. (University of Pune) (Theoretical and Computational Chemistry)

Nadkarni, V. S., Ph.D. (Bombay University) (Synthetic Organic Chemistry and Polymer Chemistry)

Verenkar, V. M. S., Ph.D. (Goa University) (Solid State Chemistry and Transition Metal Chemistry)

## **Assistant Professors**

**Dhuri, S. N.,** Ph. D. (Goa University) (Co-ordination Chemistry)

Girkar, S. V., M. Sc. (Goa University) (Synthetic Chemistry)

## Scheme of Instruction (Semester System)

**COURSES** (CHA- Analytical Chemistry, CHI-Inorganic Chemistry, CHO-Organic Chemistry, CHP- Physical Chemistry, C- compulsory, O-optional, C-credit)

Semester I & II (Compulsory Courses)		No. of
		Credits
CHIC-401	General Inorganic Chemistry	4
CHOC-401	Concepts in Organic Chemistry	4
CHPC-401	General Physical Chemistry	4
CHAC-401	Spectroscopic Methods in Chemistry	4
CHIC-402	Lab Course in Inorganic Chemistry	2
CHOC-402	Lab Course in Organic Chemistry	2
CHPC-402	Lab Course in Physical Chemistry	2
CHAC-402	Lab Course in Analytical Chemistry	2
Semester I & II (Optional Courses)		
CHIO-401	Selected Topics in Inorganic Chemistry	2
CHIO-402	Environmental Chemistry	2

GHOG-402         Concepts in Organic Chemistry         2           CHPO-401         Selected Topics in Physical Chemistry         2           CHPO-402         Mathematical preparation & introduction to Computer for Chemistry         2           CHAO-401         Analytical Techniques -1         2           CHPO-403         Diffraction Methods         2           Semester III & IV (Compulsory Courses)           NORGANIC CHEMISTRY           CHIC-501         Co-ordination and Organometallic Chemistry         4           CHIC-502         Solid State Chemistry         4           CHIC-503         Group Thocay and Spectroscopy         4           CHIC-504         Coordination and Organometallic Chemistry         4           CHIC-505         Seperiments in Inorganic Chemistry         4           CHIC-506         Experiments in Inorganic Chemistry         4           CHOC = 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC = 502         Stereochemistry and Reaction Mechanisms         4           CHOC = 503         Synthetic Methods in Organic Chemistry         4           CHOC = 504         Selected Experiments in Organic Chemistry         4           CHPC-503         Electrochemistry         4	CHOO-401	Concepts in Organic Chemistry -II	2	
CHPO-402         Mathematical preparation & introduction to Computer for Chemistry         2           CHAO-401         Analytical Techniques -I         2           CHO-403         Diffraction Methods         2           Semester III & IV (Compulsory Courses)           INORGANIC CHEMISTRY           CHIC-501         Co-ordination and Organometallic Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-504         Experiments in Inorganic Chemistry -I         4           CHIC-505         Experiments in Inorganic Chemistry -I         4           CHOC - 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC - 502         Stereochemistry and Reaction Mechanisms         4           CHOC - 503         Synthetic Methods in Organic Chemistry         4           CHOC - 503         Synthetic Methods in Organic Chemistry         4           CHOC - 503         Synthetic Methods in Organic Chemistry         4           CHOC - 503         Synthetic Methods in Organic Chemistry         4           CHOC - 503         Synthetic Methods in Organic Chemistry         4           CHOC - 503         Synthetic Methods in Organic Chemistry </td <td>CHOO-402</td> <td>Concepts in Organic Chemistry –III</td> <td>2</td>	CHOO-402	Concepts in Organic Chemistry –III	2	
GHAO-401         Analytical Techniques –II         2           CHAO-402         Analytical Techniques –II         2           CHPO-403         Diffraction Methods         2           Semester III & IV (Compulsory Courses)           INORGANIC CHEMISTRY           CHIC-501         Co-ordination and Organometallic Chemistry         4           CHIC-502         Solid State Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-505         Experiments in Inorganic Chemistry –1         4           ORGANIC CHEMISTRY           CHOC – 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC – 502         Stereochemistry and Reaction Mechanisms         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Stected experiments in Organic Chemistry         4           CHOC – 509         Advanced Thermodynamics & Kinetics         4           CHPC-501         Quantum Chemistry and Spectroscopy         4           CHPC-502         Advanced	CHPO-401			
GHAO-401         Analytical Techniques –II         2           CHAO-402         Analytical Techniques –II         2           CHPO-403         Diffraction Methods         2           Semester III & IV (Compulsory Courses)           INORGANIC CHEMISTRY           CHIC-501         Co-ordination and Organometallic Chemistry         4           CHIC-502         Solid State Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-505         Experiments in Inorganic Chemistry –1         4           ORGANIC CHEMISTRY           CHOC – 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC – 502         Stereochemistry and Reaction Mechanisms         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Stected experiments in Organic Chemistry         4           CHOC – 509         Advanced Thermodynamics & Kinetics         4           CHPC-501         Quantum Chemistry and Spectroscopy         4           CHPC-502         Advanced	CHPO-402	Mathematical preparation & introduction to Computer for Chemistry		
CHAO-402   Analytical Techniques—II	CHAO-401		2	
CHPO-403   Diffraction Methods   2		Analytical Techniques –II	2	
Semester III & IV (Compulsory Courses)	CHPO-403	· · ·	2	
INORGANIC CHEMISTRY				
CHIC-501         Co-ordination and Organometallic Chemistry         4           CHIC-502         Solid State Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-505         Experiments in Inorganic Chemistry – I         4           ORGANIC CHEMISTRY         4           CHOC – 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC – 502         Stereochemistry and Reaction Mechanisms         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHPC-504         Selected experiments in Organic Chemistry         4           CHPC-501         Quantum Chemistry and Spectroscopy         4           CHPC-502         Advanced Thermodynamics & Kinetics         4           CHPC-503         Electrochemistry         4           CHPC-504         Experiments in Physical Chemistry-1         4           CHPC-505         Experiments in Physical Chemistry-1         4           CHIO-506         Bioinorganic Chemistry         4           CHIO-507         Bioinorganic Chemistry	Semester III & I	IV (Compulsory Courses)		
CHIC-502         Solid State Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-505         Experiments in Inorganic Chemistry – I         4           ORGANIC CHEMISTRY         **           CHOC – 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC – 502         Stereochemistry and Reaction Mechanisms         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHPC-501         Quantum Chemistry and Spectroscopy         4           CHPC-502         Advanced Thermodynamics & Kinetics         4           CHPC-503         Electrochemistry         4           CHPC-504         Experiments in Physical Chemistry-1         4           Semester III & IV (Optional Courses)         INORGANIC CHEMISTRY           CHIO-501         Bioinorganic Chemistry         4           CHIO-502         Catalysis: Fundamentals and Chemical concepts         4           CHIO-503         Chemistry of Main Group Elements         4           CHIO-504         Topics in Inorganic Chemistry		` • • · · ·		
CHIC-502         Solid State Chemistry         4           CHIC-503         Group Theory and Spectroscopy         4           CHIC-505         Experiments in Inorganic Chemistry – I         4           ORGANIC CHEMISTRY         **           CHOC – 501         Organic Spectroscopy, Pericyclic Reactions and Photochemistry         4           CHOC – 502         Stereochemistry and Reaction Mechanisms         4           CHOC – 503         Synthetic Methods in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHOC – 504         Selected experiments in Organic Chemistry         4           CHPC-501         Quantum Chemistry and Spectroscopy         4           CHPC-502         Advanced Thermodynamics & Kinetics         4           CHPC-503         Electrochemistry         4           CHPC-504         Experiments in Physical Chemistry-1         4           Semester III & IV (Optional Courses)         INORGANIC CHEMISTRY           CHIO-501         Bioinorganic Chemistry         4           CHIO-502         Catalysis: Fundamentals and Chemical concepts         4           CHIO-503         Chemistry of Main Group Elements         4           CHIO-504         Topics in Inorganic Chemistry	CHIC-501	Co-ordination and Organometallic Chemistry	4	
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CHPO-503 Advances in Catalysis 4				
		1 11		
	CHPO-504	Nanoscience: Concepts and Applications	<u>'</u> 4	

CHPO-505	Lab Course in Applied Chemistry	
CHPO-506	Lab Course in Physical Chemistry	8
CHPO-507	Computational Chemistry	2
CHPO-508	Radiation Chemistry	2
CHPO-509	Applied Electrochemistry	2
CHPO-510	Biophysical Chemistry	2
CHPO-511	Dissertation	
GENERAL OP	TIONAL COURSES (III & IV)	
Semester III OF	RIV	
CHGO-502	Biological Chemistry	4
CHGO-502	Green Chemical Processes	
CHGO-503	Chromatographic Methods 2	
CHGO-504	Conventional and non-conventional Energy	

### Dissertation, if opted for, is equivalent to two optional laboratory courses

**Major Facilities:** FTIR and UV, HPLC Spectrophotometers, Catalytic reactor with on line Gas Chromatograph, Thermal Analyser, Surface Area Analyser, Electrochemical Analyser, GC and HPLC.

**Facilities sanctioned under FIST & SAP:** Computational Chemistry Laboratory, FTIR, XRD, UV-Visible Spectrophotometer, CHNS analyzer, NMR, Microwave synthesizer and LCRQ meter.

**Facilities sanctioned under DST Nano Mission Program:** AFM, VSM, BET surface area and TG-DSC (Interdisciplinary program with Physics & Bioscience).

Dept. of Computer Science	Courses Offered	Intake	Fees (Rs.)
& Technology	MCA	30	32500.00
Established: 1987	(For graduates of university	ies other than GU)	34100.00
Code: CST	Ph.D.		7700.00

The Department offers a full time 3-year programme leading to a Master of Computer Applications and also offers doctoral degree leading to Ph.D. in Computer Science & Technology. The thrust area of the Department includes Computer Graphics, Data Mining, Software Engineering, Databases, Computer Networks and Embedded Systems, Information Systems Security, Theoretical Computer Science and Data Warehousing. The alumni of the Department are extremely well placed and currently hold leading positions in reputed IT organisations in the country and abroad. The Department is very popular amongst aspiring student fraternity due to its competent faculty members and the Department's consistent efforts in achieving 100% placements every year since its inception.

### Head of Department: Rao, P. R.

List of Faculty & Specialisation:

#### **Professor**

Rao, P. R., Ph.D. (I.I.T., Bombay) (Theoretical Computer Science, Data Mining, Data Warehousing, Information Systems Security).

## Associate Professors

Kamat, V. V., Ph.D. (Goa University), (Computer Graphics & CAD, Software Engineering).

Pawar, J. D., Ph. D. (Goa University) (Data Mining, Data Structures).

Pinto, Y. F., M.C.A. (Goa University) (Database Management System, Operating Systems).

**Baskar, S.,** M.Sc. (Computer Science) (Bharathidasan University, Tiruchirapalli) (Artificial Intelligence, Compiler & Embedded Systems).

Wagh, R., M.C.A. (Goa University) (Software Engineering, GIS).

## Assistant Professor

Karmali, R., M.C.A. (Goa University) (NLP, Data Communication, Security)

## Scheme of Instruction: Semester System (Six Semesters) Choice Based Credit System

Semester I		No. of Credits
CS 11	Problem Solving with C Language	4
CS 12	Computer Organisation and Architecture	4
BM 13	Communication Skills	4
BM 14	Management Fundamentals and Information Systems	4
Semester I		
MT 15	Discrete Mathematical Structures	4
PL 16	Programming Lab	4
PL17	Software Foundation Lab	4
Semester II		
CS 21	Data and File Structure	4
CS 22	Operating System	4
CS 23	Design and Analysis of Algorithms	4
BM 24	Accounting and Financial Management	4
MT 25	Probability & Statistics	4
PL 26	Data and File Structure Lab	4
PL 27	UNIX and Shell Programming Lab	4
Semester II		
CS 31	Data Base Management Systems	4
CS 32	Computer Communication Networks	4
CS 33	Object-Oriented Programming	4
EL	Elective Paper 1	4
EL	Elective Paper 2	4
PL 36	Data Base Management Lab	4
PL 37	Object Oriented Programming Lab	4
Semester IV	T	
CS 41	Object Oriented Analysis & Design	4
CS 42	Web Technology	4
MT 43	Applied Operational Research	4
EL	Elective Paper 3	4
EL	Elective Paper 4	4
PL 46	CASE Tools Lab	4
PL 47	Web Technology Lab	4
Semester V		
CS 51	Software Engineering	4
CS 52	Artificial Intelligence & Applications	4
BM53	Decision Support systems	4

EL	Elective Paper 5	4	
EL	Elective Paper 6	4	
SM	Seminar	2	
PL 57	Software Engineering Lab		
PL 58	Artificial Intelligence & Applications Lab	4	
Semester VI			
Software Project	Development / Industrial Training		
Electives may be	offered from amongst the following subjects:		
EL 0001	Theory of Computation	4	
EL 0002	Natural Language Processing	4	
EL 0003	Data Warehousing & Data Mining	4	
EL 0004	Programming Languages	4	
EL 0005	Compiler Design	4	
EL 0006	Computer Graphics and Animation	4	
EL 0007	Distributed Database Management Systems	4	
EL 0008	Advanced Computer Architecture	4	
EL 0009	Advanced Operating Systems	4	
EL 0010	Software Architecture Design Pattern and Framework	4	
EL 0011	Human Computer Interactions	4	
EL 0012	Embedded Systems (Software)	4	
EL 0013	Network Programming	4	
EL 0014	Cryptography and Network Security	4	
EL 0015	Wireless and Mobile Networks		
EL 0016	Middleware Technology		
EL 0017	Information Retrieval	4	
EL 0018	Internet Technologies	4	
EL 0019	Image Processing & Comp. Vision		
EL 0020	Advanced UNIX programming	4	
EL 0021	Windows Programming using VC++	4	
EL 0022	Geographical Information System	4	
EL 0023	Component Technology	4	
EL 0024	Managerial Economics	4	
EL 0025	Corporate Planning	4	
EL 0026	Investment Technology	4	
EL 0027	Business Finance	4	
EL 0028	Management Information Systems	4	
EL 0029	Electronic Commerce	4	
EL 0030	Software Project Management	4	
EL 0031	Software Testing	4	
EL 0032	Organizational Behaviour	4	
EL 0033	Parallel Programming	4	
EL 0034	Java Programming		
EL 0035	, ,		
EL 0036	Foundation of Decision Processes	4	
EL 0037	Taxation Practices	4	
EL 0038	Multimedia Technologies	4	

## Major Facilities: Classroom Facilities

The classrooms are well equipped with modern training facilities. All the machines in the classrooms, faculty rooms & laboratory are interconnected via 100 Mbps switches and 24/7 broadband Internet connectivity.

### **Laboratory Facilities**

The Laboratory facilities in the Department are constantly upgraded to cater to the growing needs of students. Currently around fifty core 2 Duo nodes spread over the Department area – the laboratory as well as faculty offices – are served by Linux and Windows 2000 servers. About forty five students can simultaneously work on MS WINDOWS/UNIX/X-Windows platforms. Presently, the laboratory supports all computer languages, Integrated Development Environments and software tools available on Open Source Linux Platform. In addition to the usual Office suites, such as Microsoft Office, the laboratory also provides students and faculty with the latest versions of development tools and application platforms such as Oracle, Eclipse, Visual Studio, CASE Tools, Rational Suite, Internet Information Server (IIS) etc. The Department subscribes to the Microsoft's MSDN Academic Initiative which provides legal copies of all Microsoft software available on workstation and Server platforms.

A new computer laboratory block and additional classrooms have been constructed under MPLAD scheme. This laboratory has been furnished with modern workstations.

Legal copies of Microsoft software including operating systems and development tools are available for students for download under MSDN Academic Licence Program.

Dept. of Earth Science Established: 1987 Code: EA	Courses Offered	Intake	Fee (Rs.)
Established: 1987	M. Sc.	15	8800.00
Code: EA	Ph. D.		7700.00

The Department of Earth Science, established in 1986, offers academic programme leading to M.Sc. (Geology) and Doctoral degrees. The department annually admits about 15 students in its M.Sc. Programme and has capacity to admit 8 students for its Doctoral programme. Apart from teaching commitments, faculty members undertake several sponsored research programmes, consultative assignments and short term courses under the Continuing Classroom-cum-Distance Learning Programmes of the University. Department is also funded under DST (FIST) and UGC (SAP)-DRS-II programmes.

All the core (PC) and elective (PE) (optional-OC) courses included in the programmes have been specifically designed to meet industry standards and research requirements. The close links that the department enjoys with the industry (particularly Mining & Mineral) and research organisations, have worked towards elevating the level and quality of studies and facilities. The department also works towards reaching the general public under outreach programmes for creating awareness in conservation and management of natural resources. The Department has been actively involved in several international programmes (UNIGIS Distance Learning in GIS, International Earth Science Olympiad, etc.)

## Head of Department: Mahender Kotha

List of Faculty & Specialisation:

## **Professors**

**Chachadi, A. G.,** Ph.D. (Roorkee University) (Groundwater and Environmental Geology, Exploration Geophysics).

K. Mahender, Ph.D. (I.I.T. Bombay) (Sedimentology, Petroleum Geology, GIS and Remote Sensing).

### **Associate Professors**

Viegas A. A. A., Ph.D. (Goa University) (Igneous Petrology, Mining Geology)

Vishwanath, T. A. Ph.D. (I.I.T. Kharagpur) (Igneous and Metamorphic Petrology, Geochemistry).

## Master of Science in Geology Program Code: GL

The Masters programme involves advanced training in subjects and builds upon the foundation laid at the Bachelor's level. The focus is on building a strong theoretical and practical framework to enable students to tackle routine work in the industry as well as to take initiative in challenging new areas. Accordingly the Masters programme includes fundamental courses such as Mineralogy, Geochemistry, Structural Geology, Sedimentology, Igneous Petrology, Metamorphic Petrology, Economic Geology, Stratigraphy and Indian Geology, as well as courses related to practical aspects such as Remote Sensing, GIS and Petroleum Geology, Mining Geology, Groundwater Geology, Exploration Geophysics, Statistical Geology, etc. The coursework is aided by introduction to computer applications in various fields. Some of the computer tools that the students are introduced to during the period of their coursework include Surfer, Strater, Rockware, Surpac, ArcGIS, IDIRSI, SteroNett, ERDAS, etc. apart from other software not explicitly related to the core subjects.

As a supplement to the various theoretical courses, the Department also provides the students with an opportunity to work in the field. There are two educational field programmes in the 2<sup>nd</sup> and 4<sup>th</sup> semesters respectively, apart from the practical industry training in mining or petroleum related industries at the end of the 2<sup>nd</sup> semester.

The majority of the students over the years have been placed in mining and oil companies through regular counselling and campus placements.

# Scheme of Instruction: Semester System (Choice Based Credit System)

COMPULS	COMPULSORY CORE COURSES	
GL 101	Mineralogy & Geochemistry	5
GL 102	Structural Geology & Geotectonics	5
GL 103	Igneous Petrology	5
GL 104	Metamorphic Petrology	5
GL 105	Sedimentary Facies and Environments	5
GL 106	Principles of Geochemistry and Mineralogy	4
GL 107	Geotectonics and Structural Geology	4
GL 108	Petrology of Igneous Rocks	4
GL 109	Petrology of Metamorphic Rocks	4
GL 110	Sedimentology	4
GL 111	Geology of Mineral Deposits	4
GL 112	Practical I	3
GL 113	Practical II	3
OPTIONAL	L COURSE	
GL 201	Principles of Statigraphy and Indian Geology	4
GL 202	Economic Geology	5
GL 203	Groundwater Geology	4
GL 204	Petroleum Geology	4
GL 205	Exploration Geophysics	4
GL 206	Invertebrate Palaeontology	4
GL 207	Environmental Geology	4
GL 208	Remote Sensing	4
GL 209	Marine Geology	4
GL 210	Geographical Information Science	4
GL 211	Mining Geology	4

GL 212	Statistical Geology	3
GL 213	Industrial Mineralogy	3
GL 214	Natural Resource & Environmental Management	4
GL 215	Data Mining	2
GL 216	Term Paper	2
GL 217	Minor Project	2
GL 218	Hydrogeological Problems and Management	5
FIELD-BASE	D COMPULSORY COURSE	
GL 301	Geological Mapping & Field Work	4
GL 302	Mine Training	4
GL 303	Dissertation	8

Dept. of Mathematics	Courses Offered M. Sc. Mathematics M. Sc. (Comp. Sc.)	Intake	Fee (Rs.)
Established: 1965 (CPIR)		20	4400.00
Code: MA		10	11550.00
	Ph. D.		7700.00

## **DST-FIST/UGC-SAP SPONSORED DEPARTMENT**

The Department offers post-graduate programme in Mathematics and is oriented in research towards Topology, Knot Theory, Differential Equations, Operator Theory, Mathematical Physics, Lie Algebra and Functional Analysis.

## Head of Department: Dr. Jayanthan A. J.

List of Faculty & Specialisation:

### **Associate Professors**

Jayanthan, A. J., Ph. D. (University of Hyderabad) (Topology, Knot Theory)

Valaulikar, Y. S., Ph. D. (Goa University) (Ordinary and Delay Differential Equations)

Mohapatra, A. N., Ph. D. (Sambalpur University) (Operator Theory & Mathematical Physics).

## **Assistant Professors**

Tamba, M., Ph. D. (Goa University) (Lie Algebra).

M. Kunhanandan, M.Sc. (University of Calicut) (Functional Analysis)

### M.Sc. Mathematics

Scheme of Instruction: Semester System (Choice based Credit System)

Semester I		No. of Credits
MATH 101	Real Analysis	4
MATH 103	Linear Algebra	4
MATH 105	Several Variable Calculus	4
MATH 106	Complex Analysis	4
Elective Course		
Semester II		
MATH 102	Algebra	4
MATH 104	Topology	4
MATH 201	Differential Equations	4

Elective Course	2		
Elective Course	)		
Semester III			
MATH 107		Number Theory	4
MATH 202		Functional Analysis	4
Elective Course	2	•	
Elective Course	2		
Elective Course	2		
Semester IV			
MATH 203		Differential Geometry	4
Elective Course	2		
ELECTIVE C			
MATH 108		of Applied Mathematics	4
MATH 109	Number '	•	4
MATH 110		f Computation	4
MATH 111	Matrix G		4
MATH 112		e Equations	4
MATH 204	Lie Algeb		4
MATH 205	-	tations of Finite Groups	4
MATH 206	Commutative Algebra		4 4
MATH 207		Advanced Algebra	
MATH 208	Integral Equations		4 4
MATH 301	1 0,	Topology II	
MATH 302	Measure Theory		4
MATH 303	1 67		4
MATH 304	304 Sturm-Liouville Problems		4 4
MATH 401		Introduction to Lie Groups	
MATH 402	H 402 Mathematical Modelling		4

Dept. of Physics	Courses Offered	Intake	Fee (Rs.)
Established: 1963 (CPIR)	M. Sc.	25	8800.00
Code: PH	Ph. D.		7700.00

## **DST-FIST/UGC-SAP SPONSORED DEPARTMENT**

The Department of Physics conducts both M.Sc. Physics. Besides developing its own research programmes, the Department has strong interactions with other Departments in this University and with national institutes/laboratories. The Department has also been selected by the UGC under SAP at DRS level II for the financial support as well as DST-FIST.

Head of Department: Desa, J. A. E

### **Professor**

Desa, J. A. E., Ph.D. (University of Reading, U.K.) (Neutron Scattering, Solid State Physics).

### **Associate Professors**

Subramanian, U., Ph.D. (I.I.T., Kharagpur) (Experimental Solid State Physics).

Tangsali, R. B., Ph.D. (Bombay University) (Solid State Physics).

Pai, R. V., Ph.D. (Institute of Physics, Bhuvaneshwar) (Theoretical, Solid State Physics).

### **Assistant Professor**

Priolkar K. R., Ph.D. (Goa University) (Experimental Solid State Physics-NEXAFS and EXAFS).

## Scheme of Instruction: Semester System (Six Semesters) Choice based Credit System

Semester I		No. of
		Credits
SEMESTER	R- I	
PHC101	Mathematical Physics	5
PHC102	Classical Mechanics	5
PHC103	Electromagnetic Theory	5
PHC104	Electronics Practical	3
PHC105	Computer Programming Laboratory	2
SEMESTER	R- II	
PHC106	Quantum Mechanics-I	5
PHC107	Basic Electronics	5
PHC108	Statistical Mechanics	5
PHC109	General Physics Practicals	5
SEMESTER	R- III	
PHC201	Quantum Mechanics - II	5
PHC202	Nuclear and Elementary Particle Physics	4
PHC203	Solid State Physics	5
PHC204	Solid State Physics Practicals	4
PHC205	Seminars	2
	Summer Fellowships	1
SEMESTER	R- IV	
PHO302	Neutron Physics	4
PHO303	Superconductivity	4
PHO304	X-ray Spectroscopy	4
PHO305	Electronics Practicals - II	4
PHO306	Semiconductor Physics	4
PHO307	Projects	8
	Remote Sensing (Marine Science Department)	4

## **Major Facilities:**

Carbolite Programmable High Temperature Furnaces, Centorr Tri Arc Furnace, Rigaku X-ray Diffractometer, Retsch Ball Mill, Sieve Shaker, Optical Microscope, FTIR & Uv-Vis spectrophotometers, Electrical Resistivity, AC susceptibility, Thermopower apparatus (ambient to 10K), Dielectric Bridge, Differential Scanning Calorimeter(-140°C to 600°C), Thermo gravimetric analyser (ambient - 1100°C), Computer laboratory, Beowolf Linux Cluster, Rigaku Rotating Anode X-ray Generator, EXAFS spectrometer, Pulsed-field Loop Tracer.

Dept. of Electronics	Courses Offered	Intake	Fee (Rs.)
Established: 2010	M. Sc. (EL)	15	8800.00
Code: EL	Ph. D.		7700.00

The Department of Electronics offers an innovative program in the area of Embedded Systems. The Department offers both M.Sc. and Ph.D. degrees in Electronics. The thrust area of the program is Embedded System and Biomedical Instrumentation. Bachelor Degree students with 55% marks are eligible for departmental entrance test for admission to the M.Sc Electronics program. Summer Internship as well as industry associated mini and major projects are highlights of this program. The Department has ongoing projects in the areas of Biomedical Electronics and Hyper Spectral Imaging.

### Head of Department: Naik, G. M.

List of Faculty & Specialisation

## **Professor**

Naik, G. M., Ph. D. (I.I.Sc., Bangalore) (Opto-Electronics)

### **Assistant Professor**

Gad, R. S., Ph.D. (Goa University) (Biomedical Electronics).

## Scheme of Instruction: (Semester System) Choice based Credit System

Semester I		No. of
		Credits
ELC101	Microelectronics and VLSI Design	4
ELC102	Numerical Computation and Algorithms	4
ELC103	EDA tools-I	4
ELC104	Electronics Practicals – I	4
UEL101	Advanced Digital Communication System	4
Semester – II		
ELC201	Embedded System Design	4
ELC105	Operating system and RTOS	4
ELC202	Optical communication system	4
ELC203	Electronics Practicals - II	4
UEL102	Microprocessor Architecture and Programming	4
Semester – II	I	
ELC 204	Instrumentation & Control Theory	4
ELC 301	Electronics Practical - III	4
ELD 201	Signals and Systems	4
ELD 202	Digital signal Processing	4
ELD 301	Digital System Design using HDL	4
ELD 302	EDA tools-II	4
UEL103	Industrial Training, Miniproject and Seminar	4
Semester – IV	7	
ELD 401	ELD 401 Electronics Practicals - IV	4
ELD 203	ELD 203 Nano Electronics and Nano systems	4
ELD 303	ELD 303 Laser System Engineering	4
ELD 402	ELD 402 Project	8
UEL 104	UEL 104 Pharmaceuticals Instrumentation	4
UEL 105	UEL 105 Communication and Technical skills	4

### **Major Facilities:**

UV/Visible Spectrophotometer, Spectrum analyzer, Different lasers and light sources, ALTERA Quartus 7.0, NIOS IDE, DSP generator & IP cores, Altera DSP development boards, PIC, 89C52, ARM7/9 development kits, NI Speedy 32 kit, Xilinx IDE ISE 7.1. with IP cores, MATLAB R2008b & Instrumentation design tools like LAB View, TRI India Robotics development kits, VLSI, CAD tools, like P-Spice, Microwind; Embedded System Design tools from ALTERA, XILINX, TMS, ARM, PIC.

Dept. of Biotechnology	Courses Offered	Intake	Fee (Rs.)
Established: 2003	M. Sc.	20	8800.00
Established: 2003 Code: MB	Ph. D.		7700.00

### A DST-FIST Sponsored Department

Since its inception in 1988, the M.Sc. Marine Biotechnology programme has been funded by the Department of Biotechnology, Ministry of Science & Technology, Govt. of India, New Delhi, placing Goa University in an enviable position among the top DBT centres for M.Sc. Biotechnology, on par with Universities such as Jawaharlal Nehru University, New Delhi, M.S. University, Baroda, Banaras Hindu University, Pune University & Madurai Kamraj University, to receive continuous funding from DBT for the M.Sc. Programme. Students for the programme are nationally selected through the Combined Entrance Examination conducted by Jawaharlal Nehru University, New Delhi. In view of the reputation and standard in producing world class human resource in Biotechnology in India, the Department was among the few centres identified to double the intake of students for M.Sc. programme w.e.f. June 2003. Students qualifying through the Combined Entrance Examination receive a studentship of Rs. 1200/-p.m.

The Department is one of the pioneers in Marine Biotechnology research in the country and since the year 2008 has had the added distinction of being DST-FIST sponsored. It has recently been granted s sum of Rs.30 lakh by the DBT, exclusively for the replacement of obsolete equipment. It has excellent strengths that have been developed in the following thrust areas: Biodegradation of oil spills and tar balls by selectively developed, genetically superior, marine microbial consortia. Study of agarases, xylanases, lipases and proteases of special characteristics of commercial importance from marine microorganisms. Processes for preparation of toxins and other bioactive substances from bacteria and higher marine organisms. Bodegradation of oils spills and tar balls by selectively developed, genetically superior, Marine Microbial Consortia. Establishment of methods to assess risks due to recombinant DNA in marine environment.

### Head of Department: Ghadi, S. C.

List of Faculty & Specialisation

## **Professor**

Sangodkar, U. M. X., Ph.D. (Bombay University)(Genetic Engineering, Microbiology, Bio-Chemistry & Marine Pollution Control).

#### **Associate Professors**

Barros, U., Ph.D. (Bombay University) (Immunology, Animal Tissue Culture).

Ghadi, S. C., Ph.D. (Goa University) (Biotechnology, Bio-degradation).

Muraleedharan, U. D., Ph.D. (I.I.Sc., Bangalore) (Biochemistry, Enzymology, Biological Oceanographic Processes).

Kerkar, S. S., Ph. D. (Goa University) (Marine Microbiology, Hypersaline SRB).

# Scheme of Instruction: Semester System (Choice based Credit System)

Semester I		No. of Credits
MBT 101	Fundamentals of General and Marine Microbiology	3
MBT 102	Concepts in Biochemistry	3
MBT 103	Principles of Genetics & Molecular Biology	3
MBT 104	Principles of Oceanography	2
MBT 105	Biostatistics	2
MBL 101	Lab in Marine Microbiology	2
MBL 102	Lab in Biochemistry	2
MBL 103	Lab in Molecular Genetics	2
MBT 106	Communication Skills & Scientific Writing	2
Semester – II		
MBT 111	The Marine Ecosystem	2
MBT 112	Introductory Immunology	3
MBT 211	Cell and Developmental Biology	3
MBT 113	Bioinformatics	2
MBT 212	Plant Tissue Culture Technology	2
MBL 111	Lab in Marine Biology & Chemistry	2
MBL 112	Lab in Immunology	2
MBL 113	Lab in Bioinformatics	2
MBL 114	Lab in Plant Tissue Culture	1
MBM 111	Seminar Presentations	1
Semester – III		
MBT 221	Bioprocess Technology and Industrial Biotechnology	3
MBT 222	Recombinant DNA Technology	3
MBT 223	Animal Cell Culture	2
MBT 224	Enzymology	3
MBT 225	Molecular Immunology	3
MBL 221	Lab in Fermentation Technology	2
MBL 222	Lab in Recombinant DNA Technology	2
MBL 121	Lab in Animal Cell Culture	2
MBL 223	Lab in Enzyme Characterization	2
MBM 221	Summer Training Presentation & Report	1
MBM 222	Dissertation (Marine Biotechnology) (stage I)	2
Semester – IV		
MBT 331	Potential Applications of Marine Organisms	3
MBT 231	Aquaculture Technology & Marine Pharmacology	3
MBT 332	Applications of Recombinant DNA Technology	3
MBT 232	Biosafety & IPR	3
MBT 131	Cellular Boiphysics	3
MBT 333	Genomics and Proteomics	3
MBM 231	Seminar Presentations	1
MBM 331	Dissertation (Marine Biotechnology) (stage II)	6
MBM 131	Scuba Diving	2

During the third and fourth semesters, the students undertake independent research projects as part of the curriculum, Summer training (4-6 weeks) is mandatory after completion of the second semester and the students are placed by the Department in R & D laboratories of nationally recognized institutes and industries.

Almost 90% of our postgraduate students qualify for the CSIR/UGC fellowship and some of them secure z very high ranking at the GATE examination. This is in addition to their achievements at the DBT and ICMR fellowship examinations. The placement profile of each outgoing batch has also been excellent, with the students successfully gaining positions in nationally as well as internationally renowned institutions.

**Major Facilities:** PCR facility, UV-vis Spectrophotometers, Walk-in-Cold Room facility, Cell disruption systems, Protein Chromatography facility, Class II Bio safety Cabinet, Gel Documentation System, Lyophilizer, Tissue Culture facility, Deep freezers (-20° and -80° C), Fluorescence/Phase Contrast Microscope, Pilot-scale Fermentation, Ultrapure water system, Licensed Radioisotope Laboratory, Departmental Library, Computer Lab for Bioinformatics course.

Dept. of Botany	Courses Offered	Intake	Fees (Rs.)	
Established: 1990	M. Sc.	15	8800.00	
Code: BO	PG Diploma	10	17000.00	
	Ph. D.		7700.00	

### DST-FIST/UGC-SAP SPONSORED DEPARTMENT

The Department offers postgraduate studies and research in Botany with thrust area in Plant Diversity (Algae, Fungi and Higher Plants). Plant Molecular Biology & Genetic Engineering, Plant Tissue Culture, Plant Physiology and Mycorrhizal Research. Department has active R & D collaboration with industries on wine technology, mushroom cultivation and revegetation of mine wasteland.

### Head of Department: Sharma, P. K.

List of Faculty & Specialisation:

#### **Professors**

**Bhat, D. J.,** Ph.D. (Madras University) (Mycology, Biodiversity, Agric-Microbiology, Plant Pathology, Microbial Ecology).

**Sharma, P. K.,** Ph.D. (University of London, UK) (Plant Physiology, Plant Biochemistry, Molecular Biology, Eco-Physiology and Plant Productivity).

Janarthanam, M. K., Ph.D. (Bharathiar University) (Plant Systematics, Ecology, Biodiversity, Remote Sensing & GIS).

Rodrigues, B. F., Ph.D. (Goa University) (Cytogenetics and Plant Breeding, Mycorrhizae, Wasteland Reclamation, Medicinal Plants).

### **Associate Professors**

Kerkar, V. U., Ph.D. (Goa University) (Phycology, Bryophytes and Pteridophytes).

Krishnan, S., Ph.D. (Madras University) (Plant Developmental Biology, Rice Biology, Plant Biotechnology and Molecular Biology).

### Assistant Professor

**Kamat, N.,** Ph.D. (Bombay University) (Mycology, Fungal Chemistry, Biotechnology, Environmental Assessment).

Eligibility for Admission: The following students are eligible for admission to M. Sc. Botany Programme in order of preference.

 $\sqrt{B}$ . Sc. Botany with 6 units at T. Y.B.Sc.

 $\sqrt{B}$ . Sc. Botany with 3 units at T. Y.B.Sc.

 $\sqrt{B}$ . Sc. (Biotechnology, Zoology, Microbiology, Chemistry, Physics) with a least 4 papers in Botany during any stage of the three year course.

√ B.Sc./Graduate degree in Agriculture, Horticulture, BAMS, B.Pharm and allied subjects.

## Scheme of Instruction: Semester System (Choice Based Credit System)

Compulsory Papers		No. of Credits
BOC-101	Algae, Bryophytes, Pteridophytes Gymnosperms	4
BOC-102	Fungi, Bacteria, Viruses and Plant Pathology	4
BOC-103	Taxonomic Methods and classification of Angiosperms	4
BOC-201	Internal Morphology and Developmental Biology: Angio	4
BOC-203	Advanced Ecology	4
BOC-204	Fungal Biodiversity, Bioprospecting and Biotechnology	4
BOC-205	Plant Physiology	4
BOC-301	Plant Molecular Biology	4
BOC-302	Plant Genetic Engineering	4
BOC-303	Plants Biodiversity and Bioprospecting	4
BOC-401	Cytogenetics and Plant Breeding	4
Optional Pap	- · · · ·	
BOO-101	Techniques and Instrumentation in Botany	4
BOO-102	Bioinformatics and Chemoinformatics	4
BOO-103	Enology	1
BOO-104	Mine wasteland management	1
BOO-105	Practical course in plant identification	1
BOO-201	Plant Animal Interaction	3
BOO-202	Ethnobotany	2
BOO-203	Mycological Techniques	2
BOO-301	Applied Phycology: Utilization and management	3
BOO-302	Plant Biotechnology	4
BOO-303	Mycocrrhizal Biotechnology	3
BOO-304	Plant Histochemistry	3
BOO-305	Horticulture, Landscaping and Gardening	3
BOO-401	Fungal Chemistry and Mycoremediation	2
BOO-402	Techniques in Photosynthesis and crop productivity	2
BOO-403	Phytochemistry	2
BOO-404	Glycobiology	2
BOO-405	Remote sensing: Techniques and aplication	4
BOO-406	Plant Biochemistry	4
	Dissertation	8
	Field Trips (1 credit = 15 h of field work)	Max. 4
	Total credits offered	102

**IMPORTANT**: Courses offered by other department in the faculty of life Science and other faculties can be had by students a optional paper in consultants with respective HODs.

**Evaluation:** Evaluation of students is through internal assessment. 50% of the assessment is in the form of continuous internal assessment during the semester through multiple written tests, assignments, seminars, practices, etc. Remaining 50% of the assessment will be through written test (theory & practices) at the end of the semester.

## P.G. Diploma in Applied Plant Sciences:

The Department also offers self-financed and need-based Postgraduate Diploma in Applied Plant Sciences (horticulture, floriculture, apiculture, silviculture, organic farming, natural resource management, landscaping and gardening, mushroom cultivation and post-harvest technology) in order to develop manpower. The course

has both theory and practical components and is offered in association with various Agricultural institutes/Universities. Details can be obtained from the Department.

### Major Facilities and Equipments:

Glasshouse and Botanical Garden to cultivate and maintain medicinal, ornamental and endangered plants and to conduct research under controlled conditions; Fungus Culture Collection and Research Unit(FCCU), Plant tissue culture; Herbarium; Internet & Wi-Fi connectivity computer laboratory. Microscopes with fluorescent, phase-contrast, polarisation and bright-field modes with photography and image analyzing system, photosynthesis & productivity measuring system, Chlorophyll fluorometer, Infra-red gas analyser, oxygen evolution (photosynthetic electron transport) and consumption (respiratory electron transport) analysis, HPLC, GC, Gradient PCRs, Electrophoresis and Gel Documentation System, Double beam Spectrophotometer, -80 and -20 Deep Freezers, Freezers, high speed Homogeniser, Orbital shakes, Cooling Centrifuges, Rotary evaporators and oxygen analyzers are available in the Department.

Dept. of Marine Science	Courses Offered	Intake	Fee (Rs.)
Established: 1985 Code: MS	M. Sc.	15	8800.00
Code: MS	Ph. D.		7700.00

### **DST-FIST Sponsored Department**

The Department of Marine Sciences offers postgraduate (M.Sc.) programme in Marine Science. Marine Science is an interdisciplinary programme with common courses in the first year (I & II Semesters) and specialisation courses in the second year (III & IV semesters). Specialisations offered are Physical Oceanography, Marine Chemistry, Marine Biology and Marine Geology.

The Department also offers research (Ph. D.) programme. The thrust areas of research are:

- \*Physical Oceanography: (i) Optical Remote Sensing, Marine optics, Algorithm developments for retrieval of colour components from optically complex case II waters coastal and estuarine waters, Radiative transfer modeling of visible spectrum of electromagnetic radiation, Identification of perennial source CO<sub>2</sub> through optical remote sensing, Atmospheric correction of OCM and MODIS data Atmospheric optics, Aerosol characterization, Effect of aerosol on climate, Aerosol radiative forcing, Synoptic analysis of aerosol through satellite data, Satellite oceanography and meteorology, Air-sea interaction and genesis of water masses, Ocean circulation.
- \*Marine Chemistry: Biogeochemical cycling of nutrients and trace metals in estuaries and adjoining coastal waters; Dissolved particulate interactions of trace elements; Impact of pollutants (mining, sewage and industrial) on water quality, sediment composition and biota in estuaries and adjoining coastal waters, Speciation of some minor elements to understand dominant fraction of the total elements; Sorption modeling of trace metals.
- \*Marine Biology: Marine demersal fish biodiversity assessment, Community structure, Tropic dynamics and ecosystem function, Database and photo documentation of demersal fish communities in coastal waters.
- \*Marine Geology: Coastal and estuarine sediment characterization, Coastal morphology and dynamics, Coastal zone management, Impact of mining on lacustrine and estuarine sedimentary environment suspended and bed-load sediments, Geochemistry of lacustrine & estuarine sediments and tidal / mudflat sedimentary environment, Speciation of elements in estuarine sediments and bioavailability of metals, Magnetic susceptibility of estuarine and mudflat sediments, Suspended matter and its chemistry of Southern Ocean, Environment assessment studies of estuaries and lakes, Reading pollution history through mudflat studies.

### Head of Department: Menon, H. B.

List of Faculty & Specialisation

### **Professors**

Nayak, G. N., Ph.D. (Karnatak University) (Modern Geology, Modern Sedimentology, Sediment Geochemistry, Coastal Dynamics, Estuarine Sediments, Tidal/Mud Flats, Environmental Studies)

Menon, H. B., Ph.D. (University of Science & Tech., Cochin) (Physical Oceanography and Meteorology, Optical Remote Sensing, Marine and Atmospheric Optics, Radiative Transfer Modeling)

### **Associate Professors**

**Upadhyay, S.,** Ph.D. (University of Poona & University of East Anglia, U.K.) (Marine Chemistry, Estuarine Chemistry, Aquatic Geochemistry)

Matta, V. M., Ph.D (Andhra University) (Marine Chemistry, Environmental Pollution, Seaweed Chemistry)

Rivonkar, C. U., Ph.D. (Goa University) (Marine Ecology, Aquaculture and Fisheries)

### Assistant Professor

Can, A., M. Tech., Ph.D. (Goa University) (Satellite Meteorology and Oceanography, Physical Oceanography, Marine Meteorology)

## Scheme of Instruction: Semester System (Choice Based Credit System)

Semester I		No. of Credits
MSC101 (Core)	Physical Oceanography	4
MSC102 (Core)	Marine Chemistry	4
MSO103(Optional)	Marine Biology	4
MSO104 (Optional)	Geomorphology and Tectonics	2
MSO105 (Optional)	Physical Oceanography Practical	2
MSO106 (Optional)	Marine Chemistry <b>Practical</b>	2
MSO107 (Optional)	Marine Biology Practical I	2
Semester II		
MS201 (Core)	Marine Geology	4
MS202 (Core)	Computational Methods in Oceanography	4
MS203 (Optional)	Remote Sensing and its applications	4
MS204 (Optional)	Analytical Chemistry of Sea Water	4
MS205 (Optional)	Aquaculture	4
MS206 (Optional)	Marine Geology Practical	2
MS207 (Optional)	Computational Methods in Oceanography Practical	2
MS208 (Optional)	Remote Sensing and its application <b>Practical</b>	2
MS209 (Optional)	Analytical Chemistry of Sea Water Practical	2
MS210 (Optional)	Aquaculture <b>Practical</b>	2
MS211 (Optional)	Marine Biology Practical II	2
Semester III		
Physical Oceanogr	aphy	
MS301 (Core)	Geophysical Fluid Dynamics	4
MS302 (Core)	Ocean Atmosphere coupling and Climate	4
MS303 (Core)	Marine Pollution	4
MS304 (Optional)	Geophysical Fluid Mechanics Practical	2
MS305 (Optional)	Ocean Atmosphere coupling and Climate Practical	2
MS306 (Optional)	Marine Pollution <b>Practical</b>	2
MS314 (Optional)	Cruise Participation/Training	1
MS315 (Optional)	Departmental Seminar	1

Semester III		
Marine Chemistry		
MS302 (Core)	Ocean Atmosphere coupling and Climate	4
MS303 (Core)	Marine Pollution	4
MS305 (Optional)	Ocean Atmosphere coupling and Climate <b>Practical</b>	2
MS306 (Optional)	Marine Pollution <b>Practical</b>	2
MS307 (Core)	Marine Geochemistry I	2
MS308 (Core)	Marine Geochemistry II	2
MS309 (Optional)	Marine Geochemistry Practical	2
MS314 (Optional)	Cruise Participation/Training	1
MS315 (Optional)	Departmental Seminar	1
(-1)		
Semester III		
Marine Biology		
MS302 (Core)	Ocean Atmosphere coupling and Climate	4
MS303 (Core)	Marine Pollution	4
MS305 (Optional)	Ocean Atmosphere coupling and Climate Practical	2
MS306 (Optional)	Marine Pollution <b>Practical</b>	2
MS310 (Core)	Marine Ecology	4
MS311 (Optional)	Marine Ecology Practical	2
MS314 (Optional)	Cruise Participation/Training	1
MS315 (Optional)	Departmental Seminar	1
,		
Semester III		
Marine Geology		
MS303 (Core)	Marine Pollution	4
MS306 (Optional)	Marine Pollution <b>Practical</b>	2
MS307 (Core)	Marine Geochemistry I	2
MS308 (Core)	Marine Geochemistry II	2
MS309 (Optional)	Marine Geochemistry Practical	2
MS312 (Core)	Sedimentology	4
MS313 (Optional)	Sedimentology Practical	2
MS314 (Optional)	Cruise Participation/Training	1
MS315 (Optional)	Departmental Seminar	1
Semester IV		
Physical Oceanogr	aphy	
MS401 (Core)	Estuarine and Coastal Physical Oceanography	2
MS402 (Core)	Estuarine Chemistry	2
MS403 (Core)	Estuarine Biology	2
MS404 (Core)	Estuarine and Coastal Geology	2
MS405 (Optional)	Dynamic Oceanography	4
MS409 (Optional)	Dissertation	8
Semester IV		
Marine Chemistry		
MS401 (Core)	Estuarine and Coastal Physical Oceanography	2
MS402 (Core)	Estuarine Chemistry	2
MS403 (Core)	Estuarine Biology	2
MS404 (Core)	Estuarine and Coastal Geology	2
MS406 (Optional)	Physical and Inorganic Chemistry of sea water	4
MS409 (Optional)	Dissertation	8

Semester IV		
Marine Biology		
MS401 (Core)	Estuarine and Coastal Physical Oceanography	2
MS402 (Core)	Estuarine Chemistry	2
MS403 (Core)	Estuarine Biology	2
MS404 (Core)	Estuarine and Coastal Geology	2
MS407 (Optional)	Marine Biodiversity, conservation and practices	4
MS409 (Optional)	Dissertation	8
Semester IV		
Marine Geology		
MS401 (Core)	Estuarine and Coastal Physical Oceanography	2
MS402 (Core)	Estuarine Chemistry	2
MS403 (Core)	Estuarine Biology	2
MS404 (Core)	Estuarine and Coastal Geology	2
MS408 (Optional)	Marine Geophysics	4
MS409 (Optional)	Dissertation	8

Dept. of Microbiology	Courses Offered	Intake	Fees (Rs.)
Established: 1974 (CPIR)	M. Sc.	15	8800.00
Established: 1974 (CPIR) Code: MI	PG Diploma	10	10000.00
	Ph. D.		7700.00

The Department carries out research in thrust areas like Marine Microbiology, Microbial Ecology, Environmental Microbiology, Molecular Microbiology, Genetic Engineering , Extremophilic Microorganisms and Microbial Bioprospecting for enzymes, PHA and antimicrobial metabolites.

## Head of Department: Bhosle, S. N.

List of Faculty & their Specialization

## **Professors**

**Bhosle, S.,** Ph.D. (University of Bombay) (General and Environmental Microbiology, Marine Microbiology, Extremophilic Microorganisms).

**Dubey, S. K.,** Ph.D. (Banaras Hindu University) (Molecular Biology, Genetic Engineering, Agricultural Microbiology, General and Applied Microbiology, Environmental Microbiology, Molecular Biology & Biochemistry of metal & Organo-metal resistant of Bacteria, Microbial prospecting for enzymes and antimicrobial metabolites).

### **Associate Professors**

**Furtado, I.,** Ph.D. (University of Bombay) (Microbial Ecology of Saline Khazans, Saltpans, Aquaculture and Aquifiers, Taxonomy: Bacteria Cynobacteria. Applied Microbiology: Pigments, Enzymes, Bioactives, Remediation of Soil and Water).

Nazareth, S., Ph.D. (University of Bombay) (Biochemistry, Antimicrobials, Microbial degradations and metal remediation, Halophilic fungi).

Garg, S., Ph.D. (University of Delhi) (Industrial & Medical Microbiology, Microbial Technology, Marine Microbiology, Fungal Fermentation, Immunology, Biostatistics, Mathematics, Computer Application).

# Scheme of Instruction (Semester System) Choice Based Credit System

Semester I		No.	of
		Credits	
MI101	Microbial Biochemistry	4	
MI102	Microbial Genetics	4	
MI103	Microbial Taxonomy and Systematics	4	
MI104	Techniques and Instrumentation in Microbiology	4	
MI105	Biostatistics, Biomathematics	4	
Semester II			
MI201	Industrial Microbiology	4	
MI202	Archaea-Ecology, Physiology, Biochemistry and Genetics	4	
MI203	Molecular Biology	4	
MI204	Marine Microbiology I	4	
MI205	Mycology	4	
Semester III			
MI301	Medical Virology	3	
MI302	Envornmental Microbiology	4	
MI303	Genetic Engineering	4	
MI304	Immunology	3	
MI305	Extremophilic Microorganisms	4	
MI306	Bioinformatics	3	
MI307	Research Methodology	1	
MI308	Field trip/Summer training	1	
Semester IV			
MI401	Microbial Technology	4	
MI402	Food Microbiology	4	
MI403	Agricultural Microbiology	4	
MI404	Microbiology in environmental pollution and its control	4	
MI405	Medical Microbiology and epidemiology	4	
MI406	Marine Microbiology II	3	
MID	Dissertation	8	-
Bold indicates C	compulsory papers		

## Advanced PG Diploma in Marine Microbiology and Technology \*

UGC sponsored programme under the scheme "Innovative Programme for Teaching and Research in Inter-disciplinary and Emerging Areas". Course is of one-year duration.

Course Co-ordinator: Bhosle, S. N.

### Course structure

Compulsory Courses		Credits
		510010
MMTC 01	Microbial diversity and bioenergetics of Coastal and Ocean Econiches	
MMTC 02	Microbial Prospecting and Technology	
MMTC 03	Microbial and Marine Resources	
MMTC 04	Practical – I	
Optional Courses		
MMTO01	Marine Pollution and Microbial Remediation	
MMTO02	Microbial genetics and bioinformatics	
MMTO03	Practical –II and Training in Industry/Institute with Report	
MMTD	Dissertation (Compulsory)	

Dissertation is compulsory, will start in Semester I and continue through Semester II. Submission of dissertation will be out of the end of Semester II.

### **Major Facilities:**

High Pressure Liquid Chromatography: Lyophilisation unit; Cooling Centrifuges: Ultra Centrifuges Electrophoretic units; Fluorescent – Phase contrast and general Microscopy; UV-V is Spectrophotometer; Thermal Cycler; Gas Chromatography; Fraction Collector; UV Tran Illuminator; Millipore Ultra Filtration unit; Incubator-shaker; Spectrofluorimeter; Rheometer; Fermentor; Oxygen Analyser; Gel Documentation Systems; Walk in Cold Room.

For application form, visit Goa University website www.unigoa.ac.in

Dept. of Zoology Established: 1990 Code: ZO	Courses Offered M. Sc. PG Diploma M.Phil	Intake 15 15	Fees (Rs.) 8800.00 30500.00 9000.00
	M.Phil Ph. D.		9000.00 7700.00

### **DST-FIST/UGC-Innovative Programme Sponsored Department**

The Department offers Masters course in Zoology with emphasis on core areas and specialisation with respect to recent trends and areas of local importance. It also provides facility for Doctoral programme in areas of animal and adaptational physiology, Nutritional Biochemistry genetic toxicology, wetland biology, environmental biology, ornithology, human genetics, tissue culture, lipid biochemistry and neuroscience.

### Head of Department: Desai, P. V.

List of Faculty & Specialisation:

### **Professors**

Desai, P. V., Ph. D., F. M.A.Sc. (Shivaji University, Kolhapur) (Animal Physiology, Neurophysiology).

Shanbhag, A. B., Ph. D. (Karnatak University, Dharwad) (Endocrinology, Wetland Biology).

Roy, R., Ph. D. (Visva Bharati University, Shantiniketan) (Environmental Physiology, Lipid Biochemistry).

### **Associate Professors**

Shyama, S. K., Ph. D. (Mangalore University) (Genetic Toxicology, Human Genetics).

Pai, I. K., Ph. D. (Mysore University) (Genetics, Sericulture).

## Scheme of Instruction (Semester System) Choice Based Credit System

Semester I		No. Credits	of
ZOC101	Animal Taxonomy, Diversity	4	
ZOC102	Comparative Functional Anatomy of Non-Chordates and Chordates	4	
ZOC103	Advance Animal Physiology	4	
ZOC104	Advance genetics	4	
ZOC105	Lab course based on paper ZOC 101 & ZOC 102	2	
ZOC106	Lab course based on paper ZOC 103 & ZOC 104	2	

Semester II		
ZOC201	Aquatic Biology and Fisheries	4
ZOC202	Wildlife Biology & Coservation	4
ZOC203	Biological Chemistry & Intermediary Metabolism	4
ZOC204	Agricultural Entomology	4
ZOC205	Lab course based on paper ZOC 201 & ZOC 202	2
ZOC206	Lab course based on paper ZOC 203 & ZOC 204	2
Semester III		
ZOO301	Biology of Reproduction	4
ZOO302	Cell & Molecular Biology	4
ZOO303	Developmental Biology	4
ZOO304	Marine Zoology	4
ZOO305	Lab course based on paper ZOC 301 & ZOC 302	2
ZOO306	Lab course based on paper ZOC 303 & ZOC 304	2
Semester IV		
ZOO401	Avian Biology	4
ZOO402	Human Genetics	4
ZOO403	Genetic Toxicology	4
ZOO404	Environmental Physiology	4
ZOO405	Neurophysiology	4
ZOO406	Animal Tissue Culture	4
ZOO407	Parasitology	
	All these course are with inbuilt Lab. Course of 1 credit	<b>,</b>
ZOO408	Underwater Biology	2
ZOO409	Histology	2
ZOO410	Nutritional Biochemistry	2
ZOO411	Radiation Biology	2
ZOO412	Evolutionary Biology	2
ZOO413	Dissertation	8

Students have to choose courses of total 20 credits or more in this semester. They can also choose the equivalent courses from other departments.

## M. Phil in Marine Zoology (National Programme)

Launched in 2002, the Department also offers the M.Phil (National Programme) in Marine Zoology. Duration of the Programme is 1 year (2 semesters).

Scheme of Instruction (Semester System)

### SEMESTER - I

Paper 1 Research Methodology
Paper 2 Tissue Culture Or

&

Paper 3 Zooplankatology Or

Membrane Biochemistry & Electrophysiology Or

Marine Ecotoxicology Or

Endocrinology and Reproductive Biology of Marine Animals

## SEMESTER - II

Contact hours per paper -56 hrs

Marks for each paper -100, evaluation by external and internal examination

**ADMISSION CRITERIA:** As decided by Goa University

### PG Diploma in Clinical Genetics and Medical Laboratory Techniques

### Co-ordinator: Shyama S. K.

The Department also offers a post graduate diploma in Clinical Genetics & Medical Laboratory Techniques, with a view to train science graduates in job-oriented fields such as Clinical Genetics and Medical Laboratory techniques. The course has both theory and practical components and is run in collaboration with Goa Medical college and Goa Pharmacy College. More details can be obtained from the Department.

### **Major Facilities:**

Environmental Chamber, Animal Tissue Culture facility, Light Microscopy, Freeze Microtomy; Electrophysiology; Gas Chromatography, Flurospectrophotometry, Clinical Autoanalyser, Animaal House, Cold Room, Lyophiliser, Liquid Nitrogen Plant, Image Analyser UV – Visible Spectrophotometry; HPLC.

Dept. of Commerce Established: 1988 Code: CO	Courses Offered M. Com. MBA (FS) (Sponsored)	Intake 40 25	Fees (Rs.) 4400.00 80000.00 125000.00 7700.00	
	Ph. D.		7700.00	

The thrust areas of the Department are Accounting and Finance, Financial Services, Entrepreneurship Studies, Tourism and Hotel Management Studies. The Department has established good contacts with the industry and business enterprises in and outside Goa for corporate internships and placement services for M.Com. and MBA (F.S.) students.

## Head of Department: Ramesh B.

List of Faculty & Specialisation

### **Professor**

Ramesh B., Ph. D. (Sri Krishna Devaraya University) (Accounting and Finance, Capital Market Studies)

### **Associate Professors**

**Reddy Y. V.,** Ph. D. (Osmania University) (Accounting and Finance, Capital Market Studies)

Raju A., Ph. D. (Goa University) (Human Res. Management, Accounting & Finance, Capital Market Studies)

Subhash K. B., Ph. D. (Calicut University) (Quantitative Techniques, Finance, Materials Management)

### Master of Commerce (M. Com.)

# Scheme of Instruction (Semester System)\* (Choice Based Credit System)

Semester I		No. Credits	of
CO101	Advanced Financial Management	4	
CO102	Business Statistics	4	
CO103	Capital Markets	3	
CO104	Computer Applications	4	
CO105	Managerial Accounting	4	
Semester II			
CO201	Retail Marketing	3	
CO202	Insurance Management	3	

CO203	E-Commerce and its Applications	4
CO204	Security Analysis & Portfolio Management	4
CO205	Entrepreneurial Management	3

## Summer Training and Report -4

## \*Summer Training

At the end of 2<sup>nd</sup> semester, students will have to undergo six weeks summer training to gain on the job experience in Commercial/Industrial Organizations/Finance & Investment companies/Professional firms like CA's, Stock Brokers, Project Management consultants/small and medium enterprises in Goa or outside. At the end of the summer training candidate will be required to produce a certificate of experience for duration of two months to become eligible for admission to the second year M.Com. course.

Semester I	III	No. of
Accountin	g & Finance	Credits
CO3A1	Strategic Materials Management	3
CO3A2	Financial Services	3
CO3A3	Direct Taxes	4
CO3A4	Advanced Cost Accounting	4
CO3A5	Corporate Accounting	3
Business N	Management	
CO3B 1	Human Resource Management	3
CO3B 2	Advanced Marketing Management	4
CO3B 3	International Business Environment	3
CO3B 4	Marketing Research	4
CO3B 5	Marketing of Services	3
Semester I	V	No. of
Accountin	g & Finance	Credits
CO4A1	International Financial Management	3
CO4A2	Derivatives Markets	4
CO4A3	Cost Management	3
CO4A4	Indirect Taxes	4
CO4A5	Management of Mutual Funds	3
Business N	Management	
CO4B 1	International Marketing	3
CO4B 2	Advertising and Sales Management	4
CO4B 3	Organisational Behaviour	4
CO4B 4	Travel and Tourism Management	3
CO4B 5	Hospitality Management	3

Project Report and Evaluation – 6 Credits. Project Report evaluation by the guiding teacher 4 credits; Seminar presentation evaluation by Dept. Council – 2 credits.

## MBA (Financial Services) Course Structure

## Ist Year

Semeste	er I	No. of Credits
101	Accounting for Management	3
102	Quantitative Finance	3
103	Corporate Finance	3
104	Stock Market Operations	3
105	Security Analysis	3
106	Financial Services	3
107	Human Resource Management	2
108	Essentials of Management	2
109	Communication Skills	2
110	Group Discussion Skills	1
	Total Credits	25
Semeste	er II	
201	IT for Financial Services	3
202	Portfolio Management	3
203	Mutual Funds Management	3
204	Marketing of Financial Services	3
205	Bank Management	3
206	Financial Derivatives	3
207	Organisational Behaviour	3
208	Strategic Management	2
209	Interpersonal Skills	1
210	Report Writing	1
	Total Credits	25

## IInd Year

Semester III (23 Credits of Electives to be opted)

# Scheme of Instruction (Semester System)\* (Choice Based Credit System)

Semeste	r III	No. of
		Credits
301	Corporate Restructuring	3
302	Treasury and Forex Management	3
303	Infrastructure and Real Estate Finance	3
304	Venture Capital and Private Equity	3
305	Insurance and Risk Management	3
306	Equity and Debt Market Research	3
307	Commodity Derivatives	3
308	Global Securities Markets and Investments	3
309	Tax Planning and Management	3
310	Risk Management & Hedge Funds	2
311	Behavioural Finance	2
312	Corporate Governance	2
313	Security Laws	2

<sup>\*</sup>Summer Training/Professional Training Programme/Workshop =4 Credits At the end of second semester from May to June

314	Business Simulation Lab	1	
Core Soft Skills & Non Business Courses to be opted from other Departments			
315	Non Business Courses	6	
316	Interview Facing Skills	1	
Semester IV	Semester IV		of
		Credits	
401	Corporate Internship	8	
402	Project Report & Student Seminars	8	
	Total Credits	16	

Total Credits	
Ist Year	
Semester I	25
Semester II	25
IInd Year	
Summer Training	4
Semester III	30
Semester IV	16
Total	100

## \*Summer Training:

At the end of 2<sup>nd</sup> semester, every student shall have to undergo six weeks summer training to gain on the job training in financial services industry in Goa or outside. At the end of the summer training candidate will have to prepare a report on the work experience and present a seminar before department council. Based on the presentation the department council will award appropriate grade. The candidate also has to submit certificate of experience for duration of five weeks to become eligible for admission in the second year MBA (Financial Services) course.

### \*\*II. CORPORATE INTERNSHIP (4 months)

To gain on the job experience in selected Finance Companies/Corporations/Banks/Stock Exchanges/Regulatory Bodies/Leading Broking Firms/FII's/Consultancy & Research Firms/Foreign Exchange in India and or abroad/ Finance Departments of Industries and learn the intricacies of practical work situations. This would enrich the theoretical and conceptual knowledge of the subject in Financial Services. During this period every candidate, apart from his/her on-the-job training, has to carry out a research study in any chosen area in consultation with Department and the concerned organisation and prepare a report on the findings of the study. Every candidate has to make a seminar presentation on his or her research report at the end of the corporate internship.

### **Evaluation:**

- 1. Corporate internship shall be evaluated by the official concerned in internship organisation based on the checklist provided by the department. Based on the performance of the candidate in the organisation during internship period appropriate grade for 8 credits will be given by the organisation concerned.
- 2. Project report shall be evaluated by the guiding teacher in the department for 4 Credits and based on the quality of the report appropriate grade shall be awarded.
- 3. Project report shall be evaluated by the external examiner for 2 credits and appropriate grade shall be awarded based on quality of the report.
- 4. Seminar presentation shall be evaluated by external examiners which shall carry 2 credits. Based on the performance of the candidate in seminar presentation appropriate grade shall be awarded.

Dept. of Management Studies	Courses Offered	Intake	Fees (Rs.)
Established: 1988	MBA (GU students)	60	85000.00
Code: MG	Other University students		100000.00
	Foreign students		150000.00
	Ph. D.		7700.00

The Department provides education to prepare students for a career in management. The Department is also involved in creating and disseminating knowledge on management through research and consulting in the services and manufacturing sector.

**Admission:** The admission to MBA is based on XAT (Xavier Admission Test) conducted by XLRI, and work experience.

## Head of Department: Mekoth N.

List of Faculty & Specialisation:

### **Professor**

Mekoth N., Ph.D. (Calicut University) (Marketing, Finance)

### **Associate Professors**

Dayanand M. S., Ph.D. (Goa University) (Marketing & Tourism Management)

Hegde Dessai P., A.C.A., Ph. D. (Goa University) (Finance, Marketing)

### **Asst. Professors**

Nirmala R., Ph.D. (Andhra University) (Marketing, Human Resources)

Borde N., M. Com. (Finance)

Parob K., M. A. (Human Resources)

## Choice Based Credit System

Term 1: (J	Credits				
C1-001	Strategic Management	2			
C1-003	Marketing Management	2			
C1-004	Finance Management	2			
C1-005	Production Operations Management	2			
C1-107	Business Economics	2			
C1-101	SSP 1: Oral Communication Skills in English	1			
C1-029	Comprehensive Case Analysis 1	1			
C1-033	Learning Management through Executive Interaction				
C1-034	1-034 Seminars on Contemporary Issues				
Term 2: (5	September to December)	Credits			
C1-009	Organizational Behaviour	2			
C1-010	Advanced Marketing Management	2			
C1-011	Advanced Finance Management	2			
C1-012	Human Resource Management	2			
C1-014	Management Accounting	2			
C1-015	Macroeconomic Analysis	2			
C1-033	Learning Management through Executive Interaction				
	Internship (19th November to 7th December – 2 weeks)				
	Internship Reports				
C1-103	SSP 2: Presentation Skills	1			
C1-109	SSP 3: Report Writing Skills 1				

Term 3: (J	Credits			
C1-012	Advanced Human Resource Management	2		
C1-018	Business Research Methods	2		
C1-019	Legal Aspects of Business	2		
C1-023	Business Ethics	2		
C1-028	Indian Social, Political and Cultural Environment	2		
C1-039	Financial Markets	2		
C1-105	SSP 4- Group Discussion Skills	1		
C1-033	Learning Management through Executive Interactions			
C1-114	SSP 6: Mock Interviews by Executives			
	Electives – Business (2 Electives – per elective 2 credits)	4		
Term 4: (N	March to June)			
Code	Subject	Contact		
		Hours		
	Summer Internship in Organisations and Report	21 March		
		to 18 June		
	Internship Seminars	20 to 26		
		June		
Term 5: (J	une to September)			
Code	Subject	Credits		
	Electives-Business (6 Electives – per elective 2 credits)	12		
C1-107	SSP:Interview Facing Skills	2		
C1-033	Learning Management through Executive Interactions			
Term 6: (	September to December)			
	Electives – Business (4 Electives – per elective 2 credits)	8		
	Electives – Non Business (2 Electives – per elective 2 credits)	4		
C1-114	SSP 6: Mock Interviews by Executives	1		
C1-130	Comprehensive Case Analysis 1			
C1-033	Learning Management through Executive Interactions			
C1-035	5 Seminars on Contemporary Issues			
Term 7: (J	anuary to March)			
	Internship			
	Internship Seminars			

Courses and their allocation across terms are subject to change.

- Functional electives (such as finance, marketing, human resources, operations and systems) and industry electives (such as hospitality and tourism, IT enabled services) shall be offered within the constraints of students' demand and the resources available with the department from time to time.
- Internships and reports have 20 credits and Internship seminars have 6 credits

## Major Facilities/Features:

- Case Study methods of Harvard/IIM type
- Formal credit courses in soft skills/contemporary issues
- 100% continuous assessment
- Well placed alumni help with placement
- On line journal database
- On line industry and company database
- On line interactions through course management software
- Regular interactions with executives
- Industry internships
- Mock interviews by executives

- Faculty including visiting faculty with IIM/industry background
- Exchange program with Germany
- Wireless connectivity for laptops
- Opportunity to opt for courses from other disciplines
- Internet, audiovisual facilities and Book Bank.

#### RESEARCH STUDENTSHIP

The University invites applications for Research Studentship from full-time research fellows who are registered for the Ph.D. degree course in the University teaching departments under various Faculties, and who are not in receipt of any other scholarship/studentship, etc. The applications in the prescribed form which is available in the respective Department, should be submitted along with certified copies of the required certificates, duly recommended by the Guide and the Head of the Department to the Administrative Section III. The last date to receive applications will be notified separately.

### Conditions for the award of Research Studentship

- 1. The full-time Research Fellow should have at least second class at the graduation level and should have secured a Master's Degree by papers with minimum 55% marks or equivalent grade and/or by research from Goa University or from any other University recognised by Goa University.
- 2. A copy of the latest half-yearly progress report duly approved by the FRC should be produced.
- 3. In case the half-yearly progress reports are not satisfactory, Research Studentship is likely to be terminated.
- 4. A full-time Research Fellow holding any other scholarship is not eligible to apply.
- 5. The Research Fellow has to sign Muster Roll which will be available in the respective Department, twice every day, in the morning and in the evening.
- 6. The Fellowship is for a period of two years and on the date of application the applicant should not have completed more than eight terms.
- 7. The Research Fellow is required to apply for the second year along with the recommendation of the Guide and the certification of the HOD regarding attendance of the candidate and research work done by him/her.
- 8 Declaration from the candidate that he/she is not employed.
- 9. Scholars selected for University research/assistance/fellowship/studentship will be entitled for 30 days leave in an academic year. Leave beyond 30 days will be without scholarship.
- 10. The applications will be screened by University Research Committee and its decision will be final.
- 11. The Research Fellow is required to return the money paid to him/her to the University in case the Ph.D. course of study is terminated without completion. The Research Fellow shall be required to submit an undertaking that he/she shall complete the course, failing which the amount paid to him/her shall be refunded to the University.

### MERIT SCHOLARSHIPS/FREE STUDENTSHIPS

Applications will be invited from post-graduate students of this University for the award of Merit Scholarships/Free Studentships for the current academic year in the prescribed form which will be available in the Administrative Section III. Applications completed in all respects should reach the Administration Section III of this University on or before the prescribed date. The last date to receive applications will be notified separately.

## Conditions for the award of Merit Scholarship/Free Studentship are as under:

### 1. For Merit Scholarship

The candidates should have secured at least 55% of the aggregate marks in Arts, Commerce and Management Studies subjects and at least 60% of the aggregate marks in Science subjects including Mathematics, at the qualifying examination.

### 2. For Free-Studentships

- a. The applicant should belong to the income group as per the specified rules.
- b. The candidate should have secured at least 45% of the aggregate marks in Arts & Commerce and Management Studies subjects and 50% of the aggregate marks in the science subjects, including, Mathematics at the last qualifying examination.
- c. The beneficiary of any other Govt. Scholarship is, however, not entitled for a free studentship award.

Candidates should note that the Merit Scholarship/Free Studentship will be withdrawn if it is found from the records that they do not fulfil the conditions of at least 75% attendance at the lectures and practicals, whenever prescribed.

### 3. Educational Loan Scheme

Educational Loan Scheme of Goa State Scheduled Castes and Other Backward Classes Finance and Development Corporation Ltd. (a Govt. of Goa undertaking), 4<sup>th</sup> floor, Patto Centre, Panaji, Goa is available for the needy students from the scheduled castes, other backward classes and handicapped categories. Students who fulfil the eligibility conditions may apply for educational loan under the scheme.

### 8. FOREIGN STUDENTS

Foreign students desiring to take admission in Goa University and colleges affiliated to this University are required to apply through the Ministry of Human Resources Development, Department of Education, Govt. of India, New Delhi. A certain percentage of seats are especially reserved for foreign students at Goa University. Foreign students may also contact the Foreign Students Advisor, Goa University

As per the student Visa policy introduced by the Government of India w.e.f. 23 July 1992, the Government will grant regular Visa only to prospective college students who have firm letters of admission from Indian Universities/recognised Colleges/Educational Institutions. The recognised institutions would be those included in the list issued by the Association of Indian Universities, UGC and Ministry of Health (Medical Council of India).

Foreign students who do not have such firm letter would be given provisional student Visa by the Government of India Missions abroad only on the basis of production of provisional admission certificate issued by such recognised Universities and/or affiliated institutions. In both types of student Visa the name of the University and the college where the students have secured admission should be mentioned in the Visa of the foreign students. The practice of issuing 'X' Entry Visa to prospective foreign students who do not have firm letters of admission has been discontinued.

No admission to foreign students is granted if their passport shows any type of Visa other than students/provisional student Visa. Students having 'X' Entry Visa have to go back to their countries even if they get admission in Indian Universities etc., at the expiry of the initial period of stay allowed in their original Visa. Hence, under no circumstances, a change of purpose of visit to India will be allowed. Nor any change of institution (other than that mentioned in the student's Visa/provisional student's Visa) will be allowed. A foreign student will be permitted to take admission at this University on the basis of a Visa granted to study at this University

Foreign students may contact the Foreign Students' Advisor (Prof. B. F. Rodrigues, Department of Botany, e-mail: felinov2001@yahoo.co.uk and felinov@rediffmail.com for necessary guidance.

### 9. LIST OF PRIZES AND AWARDS

The following Awards/Scholarships/Prizes/Medals have been instituted for students securing highest marks in the qualifying examinations of the PG Departments:

Shri Venkatesh Govind Sinai Virginkar Prize
 Prof. G. D. Parikh Memorial Scholarship
 M. A. Economics

3. Dr. P. R. Dubhashi Award M.A. Economics, Political Science, Sociology, History,

Philosophy.

4. EDC Gold Medal MBA

5. Prof. D. B. Wagh & Hira Wagh Fund M.Sc. Mathematics or Physics

6. Francisco Correia Afonso Memorial Prize M.A. English

7. Late Smt. Rukminibai & Late Baburao Wader Memorial Prizes M. A. Marathi

8. Dr. V. V. R. Varada Chari Gold Medal in Marine Science M.Sc. Marine Science (Specialisation in Oceanography)

9. Late Dr. Leo Mackensen Barros Gold Medal M.Sc. Marine-Biotechnology

**10. Shri Megha Shyam Parshuram** M.A. Portuguese,

**Deshprabhu Parithoshik** M.A. French or M.A. History.

**11. Dr. Vithal R. Mitragotri Memorial Prize**M.A. History **12. Jindal Jubilee Gold Medal**M.Com.

**13. X<sup>th</sup> Indian Council of Chemistry Conference** M.Sc. Inorganic, Organic& Physical Chemistry (1 each)

14. Late Dr. G. V. Kamat Helekar Endowment Prize M.A. Economics

15. Late Miss Kavita Devraj Anand Prize M.Com.

16. Prof. F. B. Antao Gold Medal M.Sc. Geology
 17. Shri. Prabhakar Shejwadkar Gold Medal M.A. Hindi

18. Rotary Club of Panaji Scholarship
 19. Uttaranchal Sanskritik Mandal Goa Scholarship
 M.A. Hindi

20. Prof. S. K. Paknikar Research and

Educational Trust Endowment M.Sc. Organic Chemistry

21. Coca-Cola Gold Medal M.Com. and M.Sc. Chemistry (one each)

M.Com. and M.Sc. Chemistry (one each)

22. Coca-Cola Cash Prize
 23. Late Shri Dilip Kumar Rayu Prabhu Mahambre
 M.Com. and M.Sc. Chemistry (one each)
 M.Sc.- Botany; M.A.- Economics;

Gold Medal (4 Medals)

M.A. – Konkani ; M.A.- Philosophy/
Political Science/ Sociology by rotation

24. Department of Zoology Gold Medal M.Sc. Zoology

25. IV SERC School in Physics Gold Medal M.Sc. (Physics & Electronics)

**26. Prof. Daleep Singh Research Scholarship** Ph.D. in Economics on a topic relating to a former Portuguese

Colony in Africa, particularly Angola and Mozambique.

27. Prof. N.C. "Nigam Memorial Gold Medal" M.Sc. Microbiology

28. Late Shri. Janardan Gopal Thaly Memorial M.F.S.

Gold Medal

31. Francis Simon Cabral Gold Medal

**29.** Late Smt. Laxmi Narayan Shet Narvekar Prize B.Sc. (Amongst students admitted to M.Sc.

Mathematics at Goa University)

30. Tasneem Fazal Gold Medal and cash prize

Mathematics at Goa University)

Lady student topper in B.Sc. from GU

M.Sc. Chemistry

taking admission in M.Sc. (Physics)

32. Satyajit Kerkar Award Gold Medal M.Sc. Marine Biotechnology

33. CSI, Goa Chapter - Gold Medal M.C.A.

**34. Yeshwant Govind Kamat Award**B. Sc. Mathematics of Goa University and student

enrols for M. Sc. Maths in Goa University.

35. Finalists Do Setima Ano Do Liceu - 1957 Gold Medal M. A. Portuguese, M. Sc. Mathematics

36. **Dr. Wilfred De Souza Gold Medal** M. S. (Surgery)

Note: More details about the qualifications for the award of the above prizes/awards may be obtained from the academic section of Goa University.

## **LIST OF AFFILIATED COLLEGES AS ON MAY 2011**

Sr. No	Name of College	Address	Name of the Principal	Telephone/ Fax	Courses Offered
1	Smt.Parvatibai Chowgule Cultural Foundation's College of Arts & Science,	P.O. Fatorda, Margao, Goa- 403602(India)	Dr.R.V. Gaonkar principal@chowgulecollege. ac.in	2759504, 2759231 2759062 2759067	B.A./B.Sc/ B.A.in English, History,Philosophy, Hindi, Geography, Economics, Konkani, Marathi, Psychology B.Sc in Physics/ Chemistry/ Botany, Zoology/ Geology/ Computer Science/ Mathematics, Biotechnology M. A. (Geography) M.Sc.(Inf.Tech)/PGDCA/ P.G. Diploma in Human Genetics & Pathology / P. G. Dip. in Personal Fitness & Health Club Management
2	Dempo Charities Trust Dhempe College of Arts & Science,	P.O.Box No.222, Miramar,Panaji Goa – 403 001	DrYasmin Modassir (Offg.) dhempe@rediffmail.com	2462376, 2461507 2462315-(Fax)	B.A./B.Sc/ B. A. in Konkani/ Marathi/ Hindi B.A. in English/Economics/ Political Science/ History/ Philosophy & Psychology/ B. Sc. in Fire Technology B. Sc. in Chemistry/ Botany/ Physices/ Geology/ Zoology/ Biotechnology/B.Sc. Computer Science/ Mathematics B.Sc. Biotechnology P. G. Diploma Course in Journalism & Mass Communication,
3	Carmel College of Arts, Science & Commercefor Women	Nuvem, Salcete- Goa-403 604	Dr. (Sr) Aradhana A.C. carmel_goa@sancharnet.in	2790959 2790714-Fax	B.A/B.Sc/B.Com./ B.Sc. in Biotechnology/ Electronics/ Chemistry, Botany, Zoology, Physics, B.A.in Psychology, History, Political Science, Economics, Konkani, English) M.A.(Counselling Psychology), M. Com.
4	Ponda Education Society's Shri Ravi S. Naik College of Arts & Science,	P.O.Box No.3, Farmagudi, Ponda-Goa 403 401	Dr. A.S. Dinge pesponda@sancharnet.in	2335171 Fax. 2335296	B.A./B.Sc./ B. Sc. in Microbiology/Physics, Botany, Zoology, Chemistry B.A. in Political Science, Marathi
5	St. Xavier's College of Arts, Science & Commerce	Mapusa, Bardez, Goa	Rev.Fr.Jose Walter Benigno de Sa (Ph)2254927  xavierscollege@sancharnet.i n xavierscollege@bsnl.in	2262356 2262356-Fax.	B.A /B.Sc. /B.Com /BCA /BBA/)/ B.A.in International Studies/BTTM/ Journalism/ Anthropology B.A. in Hindi/Marathi/Konkani/ Mass Comm. & Videography/ Psychology/ English/ Journalism B.Sc.in Mathematics/ Microbiology/ Physics/ Botany/ Computer Science/ Electronics/ Biotechnology/ Chemistry M.Com /MA(Psychology) M. Sc. in Physical Chemistry

6	Dnyanprassarak Mandal's College of Arts, Sou. Sheela Premanand Vaidya College of Science & V.N.S. Bandekar College of Commerce,	Assagao, Bardez-Goa-403 507.	Dr. D.B. Arolkar dbarolkar@rediffmail.com Dmscollege@yahoo.com	2268488 2268683 Fax-2268683	B.A./B.Sc./B.Com./B.B.A./BCA/. B.Sc in Chemistry/ Electronics/ Computer Science M.Sc.Pharmaceutical Chemistry M. Com
7	Govt.College of Arts,Science & Commerce	Sanquelim, Goa-403505	Ms.Lucy James (Officiating) govcol@sancharnet.in	2364271 Fax-2364271	B.A/B.Sc./B.Com./ B. Sc in (Biotechnology)
8	Govt.College of Arts, Science & Commerce,	Quepem-Goa.	Shri. Bhaskar Nayak gcascq@rediffmail.com	2662342 Fax-2664239	B.A./B.Sc./B.Com.
9	Government of Goa Govt. College of Arts, Science & Commerce	Khandola, Marcela-Goa. 403 107	Dr. M.M.Sangodkar gcasck@rediffmail.com	2288369 Fax-2287718	B.A./B.Sc./B.Com./ B.Sc. in Microbiology/ Computer Science
10	Indian Naval Academy Ezhimala P.O. Kannur (Dt) Kerala -670310	Kerala-670310	Commander K. M. Ajay	224168	B.Sc. (Naval Science)
11	Goa Salesian Society's Don Bosco College	Panaji-Goa	Dr.(Ms) Marie Raj dlophyedu@yahoo.co.in donboscocollegegoa.com	5644321/ 2221986 Fax-2224131	B.C.A/B.P.Ed./BTTM/ BSW/B.B.A./ B.A. in Mass Media M.Com.
12	Zantye Brothers Educational Foundation's Narayan Zantye College of Commerce	Bicholim, Goa-403529	Shri. Arun Sakhardande zantyeedu@rediffm	2361377 2363769 Fax-2361377	B.Com./PGDCA
13	Murgaon Education Society's College of Arts & Commerce,	Zuarinagar, Goa-403726	Dr. R.V. Hajirnis mescollegel@rediffmail.com	25555772 Fax- 2556010	B.A/B.Com/B.B.A/B.C.A B.A. in. Sociology, Economics, Konkani/ Computer System for B.Com & B.Com Shipping Management.
14	Govt. College of Arts & Commerce	Virnoda, Pernem, Goa-403512	Dr. Gervasio Mendes gcacpg@sancharnet.in	2201210 Fax-2201762	B.A./B.Com.
15	Rosary College of Commerce & Arts	Navelim-Goa, India-403707	Dr.Simao Diniz rosary_1990@sify.com	2736864/ 2701564 Fax-2736864	B.Com./B.A./B.C.A./B.B.A./ M. Com./
16	Fr. Agnel College of Arts & Commerce	Pilar, Goa-403203	Fr. Fredrick Rodrigues (Officiating) fragnelcol@rediff.com fr.agnelcol@yahoo.co.in	2218673 Fax-2219833	B.A./B.Com/B.C.A./
17	Cuncolim Educational Society's College of Arts & Commerce	'Shri Pio F. Lawrence Complex' Cuncolim, Salcete, Goa-403703	Dr. Laximan G. Naik Cescac21@yahoo.co.in	2865210 Fax-2865210	B.A./B.Com.
18	Dnyan Prabodhini Mandal's Shree Mallikarjun College of Arts & Commerce	Delem, Canacona, Goa-403702	Dr. Jagmohan Singh dpmsmc@sify.com	2633422 2633433	B.A./B.Com.
19	Dempo Charities Trust's S.S. Dempo College of Commerce & Economics	Serra Bldg; Near All India Radio, Altinho, Panaji Goa 403 001	Dr.Radhika Nayak	2226806 Fax-2421734	B.Com/ /BBA/ M.Com./PG Diploma in Event Management.

20	Vidya Vikas Mandal's Shree Damodar College of Commerce & Economics,	P.O.Box No.347, G.R.Kare Road,Tansor, Comba, Margao-Goa 403 601	Dr. I. Bhanu Murthy principal@damodarcollege.o rg dancoll@sancharnet.in	2714224- extn.21 Fax-2732084	B.Com/B.C.A/ Bachelor of Financial Services/ M.Com./ PG Diploma in Business Journalism.
21	Goa Vidyaprsarak Mandal's Gopal Govind Poy Raiturcar College of Commerce and Economics,	Post Box No. 102, Farmagudi- Ponda, Goa-403401	Shri. P.M. Bhende gvmcce@sancharnet.in	2335875 Fax-2335819	B.Com./B.C.A./M.Com.
22	Saraswat Vidyalaya's Sridora Caculo College of Commerce & Management Studies	Telang Nagar Khorlim, Mapusa-Goa- 403 507	Shri Santosh B. Patkar Caculo_college@sity.com	2254478/ 2250042 Fax-2250208	B.Com./B.B.A./BCA
23	Vidya Vikas Mandal's H.M.N. Gaunekar Institute of Management Training & Research	Shree Damodar College Complex, Margao-Goa	Shri. Atul Shah (Director) imtr_goa@yahoo.com	2700667 2732663 Fax-2732084	PG Diploma in Management. (PGDM)
24	INS Hamla	Marve, Malad (W) Mumbai-400064	Commander R K Singh	28822570 Ext.2433 Fax-022- 28445390	M.B.A. (Logistics Mangt)
25	Vrundavan Institute of Nursing Education & College of Nursing	Near Binani Glass Fibre Pvt. LTD, Mushir Wado, Colvale Bardez-Goa- 403513	Ms.Sharon Nazareth (Acting) vhrc@sancharnet.in	3260844 Fax-2250309	B.Sc. Nursing
26	Victor Medical & Research Foundation College of Nursing	C/o Apollo Victor Hospital, Malbhat, Margao-Goa.	Ms. Maria Antao Antao_maria@yahoo.com info@alconvictorgroup.com	2728888 Fax-2726090	B.Sc. Nursing
27	Institute of Nursing Education, Goa.	Bambolim-Goa	Mrs. Carol Noronha nursing@sancharnet.in	2226505	B.Sc. Nursing
28	Shivgram Education Society's Shri Kamaxidevi Homoeopathic Medical College & Hospital,	'Shiv Shail' Shiroda Goa 403 103, Goa- India	Dr. Arvind Kothe arvindkothe@indiatimes.com	(O)2306842 2307442 2307441 (Hos) 2306218 Fax-2307001	B.H.M.S./PG in Materia Medica
29	Shree Bharateeya Sanskriti Prabodhini's Gomantak Ayurveda Mahavidyalaya & Research Centre	'Shivshail' Shiroda-Goa- 403103	Dr.Anura Bale In-Charge) ayurgoa@sancharnet.in	2306309 Fax-2307394	B.A.M.S.
30	Devi Sharvani Education Society's V.M. Salgaocar College of Law	Miramar, Panaji- Goa-403 001, India.	Dr. M. Pinheiro feedback@vmslaw.edu	2462225 Fax-2464211	LL.B. Degree/LL.B.(Hons) / LL. M. & Research Centre.
31	Vidya Vikas Mandal's Govind Ramnath Kare College of Law	P.O. Box No.777, Govind Ramnath Kare Road, Tansor, Comba, Margao-Goa- 403601	Shri. A.S. Nadkarni karelaw_goa@rediffmail.co m	2715510 Fax-2732661	LLB,LL.B.(Hons.)/ P.G. Diploma in Labour Law & Labour Welfare, and LL.M. & PG Diploma in Corporate Law
32	National Hydrographic School	C/o Headquarters, Goa Naval Area, Vasco-da- Gama, Goa- 403802	Commodore K.M.Nair (Officer-In-Charge) nhsgoa@hotmail.com	2513951 (Extn)2800/ 2582800 Fax-2513419	Master in Hydrographic Survey

33	Govt. of Goa Goa College of Music	Dr.T.B. Cunha Educational Complex, Altinho, Panaji- Goa 403 001	Shri. Kamlakar B Naik	2432528 2232507	UG Courses/PG Courses in Music
34	Goa College of Art,	Altinho, Panaji- Goa.	Shri. M.V. Vengurlekar goartcol@goa.nic	2226104 Fax-2426027	B.F.A./Applied Art B.F.A./Painting
35	Institute of Psychiatry & Human Behaviour,	Bambolim-Goa.	Dr. V. N. Jindal (Dean In- Charge)	2458687 Fax-2458240	P.G. Courses in M.D./D.P.M. (Psychological Medicine)
36	Government of Goa Institution Goa College of Architecture	Dr.T.B. Cunha Educational Complex, Altinho, Panaji- Goa-403001	Dr.Ashish K.Rege Gca_goa@sancharnet.in	2436435 2227144 2236435 Fax-2227144	B. Arch.
37	Government of Goa Goa College of Home Science,	Dayanand Bandodkar Road, Campal, Panaji- Goa	Ms. Rajal K Shinkre principalgchs@rediffmail.co m	2227603 Fax-2425254	B.Sc. (Home Science)
38	Ponda Education Society's College of Pharmacy Education & Research	Farmagudi, Ponda, Goa-403401	Dr.R.V. Gaitonde principal@pespharma.edu.in	2335020, 2980501 Fax-2335020	B.Pharm
39	Government of Goa, Goa College of Pharmacy,	Panaji-Goa.	Dr. M.G.Pai (Offg. Principal) cocopharmacy@dasaone.in	2226882 Fax-2226883	B.Pharm/M.Pharm
40	Goa Dental College & Hospital,	Bambolim Goa- 403202	Dr.P.K. Chandra	2459812-15 (F)2459816	B.D.S./M.D.S
41	Shree Rayeshwar Institute of Engineering & Information Technology	'Shiv Shail" Karai Shiroda, Goa-403103	Dr.N. Somayaji Col.principal@ritgoa.com	2307001 2307032 2307099 Fax-2307001	B.E. Electronics & Telecommunications Engineering/Computer Engineering/Information Technology
42	Padre Conceicao College of Engineering	Agnel Ashram, Agnel Ganv, Verna-Goa 403 722	Dr. L. C. Mesquita agnelgoa@sancharnet.in	2791266-67 Fax-2791268	B.E./ Electronics/Computer Engineering/ Information Technology/Mechanical, M.E. (Information Technology)
43	Govt. of Goa College of Engineering, Goa	Farmagudi, Ponda, Goa-403401	Shri Vivek Kamat ppl@gec.ac.in	2336301 2336401 Fax-2336401 2335021	B.E./M.E. Electronics and Telecommunication(Micro Electronics) M.E. (Elect.Comm. & Instrumentation)
44	Goa Medical College,	Bambolim Goa.	Dr. V. N. Jindal	2458727 Fax-2458728	M.B.B.S.(P.G. Diploma courses)/MD/MS/ M.Ch. Neurosurgery/MD in Anaesthesiology (additional 3 Seats)
45	Ponda Education Society's College of Education	Farmagudi, Ponda Goa- 403401	Dr. Geeta lyer (Actg.Principal) pes.principal.edu@gmail.co m	2980531, 3293574	B.Ed.
46	Nirmala Institute of Education	Altinho, Panaji-Goa 403 001-India	Dr. Rita Paes niegoa@sancharnet.in,niego a@gmail.com	2225633 Fax-2420186	B.Ed./PG Diploma in Guidance & Counseling/B. Ed. (Special Education)
47	Goa Vidyaprasarak Mandal's College of Education	Post Box No.139, Ponda Goa 403 401.	Dr. Louis Vernal educol@sancharnet.in	2318258 2316340 Fax-2315168	B.Ed.
48	Govt.College of Commerce.	Borda- Margao,Goa.	Dr.Renji George Amballoor (Offg.Principal)	2700555	B.Com.

### 11. INNOVATIVE PROJECTS/PROGRAMMES

### (a) Distance Education, Information and Training Infrastructure (DEITI).

Goa University has set up Distance Education, Information and Training Infrastructure (DEITI) funded by Distance Education Council (Govt. of India) under Ministry of Human Resource. The set up is meant to cater distance education to the people of Goa through the satellite technology. There are 25 DRS (Direct Reception System) centres set up at selected Colleges and Higher Secondary Schools covering all 11 Talukas. The DEITI telecasts educational programmes as well as mass awareness programmes for students, teachers and general public at various DRS centres.

The DEITI is well equipped with its state-of-the-art studio having all kinds of facilities of audio-video recording and editing. The DEITI also organizes live interactive programmes where the students and teachers interact with the Resource persons on the specific subject. The studio facility is also made available on commercial basis for indoor/outdoor shooting, recording and editing at reasonable rates.

In charge (Administration): Chakraborty M., Head of Computer Centre

## (b) Study India Programme (SIP)

The SIP programme is offered to a group of foreign students wanting to pursue study in India to earn credits. The universities/institutions desirous to send a batch consisting not less than five students are required to contact the SIP Coordination Committee to prepare and sign a Memorandum of Understanding containing the course outline, time-schedule, credit transfer, and fee structure. The MOU is a prerequite for launching the SIP. The University does not entertain inquiries of students not supported by their respective universities/institutions.

Co-ordinators: Somayaji G., Tripathi R., Bhatikar R.

Contact e-mails: ganesh@unigoa.ac.in, rmt@unigoa.ac.in and rajesh@unigoa.ac.in

### (c) Online Distance Learning Programs (UNIGIS Unit)

Goa University, in collaboration with University of Salzburg, Austria, offers UNIGIS Online (Internet based) Courses (M.Sc. & Professional Diploma) in Geographic Information Systems & Science. The Courses are open to students from India and foreign countries. The first batch of the courses commenced in April 2005.

More information is available on website www.unigis.net/india.

Co-ordinator: Mahender K., e-mail: kotha\_unigis@yahoo.com

### 12. FACILITIES & OTHER ACTIVITIES

### a) LIBRARY

The University Library and Information Resource Centre of the Goa University is in the 25th year. A library conceived in the year 1965 as a part of the Post Graduate Centre of Bombay University, then called CPIR, with its modest collection has grown into the well developed Goa University Library of today. At present library has a collection of 126558 number of books and 8500 volumes of bound journals. The library is subscribing to 424 periodicals out of which 148 are foreign journals. The library subscribes to 424 periodicals out of which 148 are foreign journals. The library is getting a large number of publications on gratis too. The library has been designated as an UN Depository center and it is receiving documents and United Nation's publications since 1996. The library is automated for its routine tasks and the entire collection is bar-coded.

The University Library and Information Resource Centre is housed in a magnificent building of more than 6,500 sq.m. that includes stack-rooms, reading rooms, periodicals area, computer center, administrative divisions, reception and circulation area. Back volumes of all important journals are available and the task of plugging lacunae in important serials is being actively pursued. The Chemical Society has commended the Library with a plaque for its complete collection of Chemical Abstracts. Our readership has now crossed 4,000 members from

the academic community in and around the state of Goa. The Goa University is also a partner in the nationwide INFLIBNET programme of the UGC.

### **Special Collections**

Goa University is the repository of several rare and special interest holdings particularly in the area of Indo-Portuguese history. Enriched by private donations from over 52 scholars, in particular the noted historian Dr. P.S.S. Pissurlekar and Dr. Nuno Gonsalves, the rare and archival material in this collection has served as reference material to present day scholars who use it for their research. This collection has been catalogued and indexed in a special edition bibliography.

### **Digital Information Services**

The Library also offers access to general reference materials like the Encyclopaedia Britannica and the Encyclopaedia of Science and Technology, the World Book Encyclopaedia, The Oxford English Dictionary and the Manorama Yearbook. The library also holds in its digital collections the INFLIBNET's COPSAT database, through which the abstracts of Science and Technology journals can be searched.

### Library Home Page

The library home page can be accessed through INTERNET link: <a href="http://goalnet.unigoa.ac.in/gulibrary/">http://goalnet.unigoa.ac.in/gulibrary/</a> index.htm. This page explores all resources of the library. All the relevant information and the services are detailed in this page. This site will answer most of the questions of the users.

## Online Public Access Catalogue:

The Library website offers an online public access searchable digital catalogue of its holdings exceeding one lakh titles both on the campus-wide Intranet and the Internet.

<u>INTRANET:</u> http://192.168.101.30:9095/gulibrary/index.htm <u>INTERNET:</u> http://202.141.98.227/gulibrary/index.htm

Network of Academic Libraries in the state of Goa: The Goa University Library with the help of NewGenLib Library Software has been able to host the website of Goa University Academic Library Network (GOALNET). All the member libraries databases are hosted on this site thus creating the Union Catalogue of Goan Academic Libraries. The website can be visited at the URL: <a href="http://goalnet.unigoa.ac.in/">http://goalnet.unigoa.ac.in/</a>

It is proposed to create a Digital library of thesis, dissertations and projects submitted to Goa University Library and subsequently join the National/International forums for sharing the resources.

### **UGC-INFONET Consortia**

Goa University library being the member of UGC-Infonet program avails the IP authenticated E-journals subscription facility extended by the INFLIBNET Ahmedabad. All users of the library can access these electronic journals through the Intranet:

### Internet link for searching UGC infonet:

http://www.inflibnet.ac.in/econ/search.html

Internet link for jccc@ugc-infonet:

http://www.jccc-ugcinfonet.in/

**DELNET Services**: Developing Libraries Network (DELNET) has been offering inter-library loan services to the subscribed libraries. Goa University Library has access online to the various services of DELNET like "Database of Periodicals Articles", "Union Lists", "Database of Thesis and Dissertations", and host of other databases.

### **Library Working Hours**

On working days 9.00 a.m. to 6.30 p.m.
Off Saturdays 10.00 a.m. to 5.00 p.m.
Vacation 10.00 a.m. to 5.30 p.m.

### (b) OCEAN AND ATMOSPHERIC SCIENCE TECHNOLOGY CELL (OASTC)

Ocean Science and Technology Cell (OSTC) in the field of Marine Microbiology was established at Goa University in January, 1998 with the support of Department of Ocean Development, New Delhi. The Department of Ocean Development is now merged with the Ministry of Earth Sciences and the Cell is designated as Ocean Atmospheric Science and Technology Cell (OASTC). The objectives of the Cell are to strengthen academic and scientific work in the area of Ocean Sciences and to recommend and monitor the progress of research projects received from different Universities, Institutions around the Western region of the Country in the area of Ocean Sciences. The Cell functions under the guidance of the Management Board constituted by Ministry of Earth Sciences with Prof. Dileep Deobagkar, Vice Chancellor, Goa University, as the Chairperson. Research Co-ordinator: Bhosle S., Department of Microbiology.

#### (c) CENTRE OF EXCELLENCE IN MARINE MICROBIOLOGY

Goa University has also established a Centre of Excellence (COE) in Marine Microbiology supported by the Ministry of Earth Sciences, in December 2006, with thrust on Microbial Bioremediation and Bioproducts. The objective of the Centre is to strengthen academic and scientific work in the area of Marine Microbiology and support projects in this area through funding from the Ministry of Earth Sciences. The Centre has an internal Advisory Committee with members from Goa University and functions under the guidance of the Management Board constituted by Ministry of Earth Sciences. Prof. Dileep Deobagkar, Vice Chancellor, Goa University is the Chairperson for both the committees. **Principal Investigator: Bhosle S.**, Department of Microbiology

#### (d) UGC - ACADEMIC STAFF COLLEGE

This College has been functioning at the University campus since 1988 and is providing the required Orientation, Refresher and other Courses for the Teaching Faculty at PG Departments and affiliated Colleges/Institutes of Goa University and other Universities in the country. Being one among 57 similar colleges set up and funded by the UGC in different Universities, this College has played a major role in the training of University/College teachers in a commendable way. With the establishment of the Computer Lab provided with special funds from UGC, the activities of the College have been further focused to include Internet/specialized subject-specific software as an integral part of Orientation/Refresher programmes.

In-charge Director: Rebeiro P.

#### (e) UNIVERSITY SCIENCE INSTRUMENTATION CENTRE (USIC)

University Science Instrumentation Centre (USIC) is a central instrumentation facility of the University consisting of Electronics, Mechanical and Glass Blowing workshops managed by faculties, officers and trained technicians. The Centre was established in 1990 during the Eighth Plan period with an independent building having 250 sq. meters, housing all three workshops. The main aim is to strenghthen the laboratories of user Departments by way of equipment maintenance, calibration of test and measuring instruments, fabrication of gadgets and instruments, attachments required for some imported instruments so as to adapt them to Indian electrical standards etc. The Glass Blowing workshop is mostly involved in design and fabrication of glass apparatus as per the design submitted by the researchers, which are otherwise not available generally in the market and repair of costly glass apparatus. The work undertaken by USIC can be broadly classified as analytical services for sophisticated instruments, maintenance of equipments for Language and Science Laboratory, fabrication of teaching aids, development of new instruments, thus covering entire objective of USIC.

Apart from routine work, USIC helps the University in infrastructure development in the area of campus telephone network, purchase of sophisticated instruments, establishment of local area network, satellite based distance education programme, library digitization etc. Based on the good performance of the USIC, the UGC has sanctioned an Infrastructure Development Project, Instrument Maintenance Facility (IMF). Based on the success of USIC during the last ten years, UGC has now sanctioned additional building of 250 sq mtrs under Xth plan to expand the activities of USIC. USIC is also involved in R&D activities. Indian Council Of Medical Research (ICMR) has granted research project amounting Rs. 10 lakhs to design and develop a non-invasive Glucometer for human blood glucose analysis.

Head of USIC: Naik G. M.

#### (f) REMOTE SENSING LABORATORY

A Remote Sensing Laboratory has been established with financial assistance from Indian Space Research Organisation (ISRO). The facilities of the Laboratory include hardware consisting of server and four nodes and software necessary for image processing. Image processing package such as ERDAS IMAGINE has been procured. An interdisciplinary course has been introduced across the different faculties where remote sensing technique has application. This Laboratory provides hands on training to students who opt for interdisciplinary course on remote sensing and research and thus cater to the country's need for trained manpower in this field. At present there are ongoing projects worth Rs. 2 crore funded by different agencies like Naval Research Board, Space Applications Centre, ISRO, Space Physics Laboratory of VSSC, ISRO and Indian National Centre for Ocean Information Service of Ministry of Earth Science, Delhi and National Institute of Oceanography, Goa. All these projects are carried out by Department of Marine Sciences.

Co-ordinator: Menon H. B., Department of Marine Sciences

# (g) CAMPUS NETWORK AND INTERNET FACILITY

Goa University has got a very strong IT intrastructure in the campus to meet the challenges of advancement of information technology. All administrative sections and academic departments on the campus are connected through the campus wide network, which is on fibre optic backbone. The Twenty four hours unlimited internet access is also available on the campus network. The University has recently established 2 Mbps Internet bandwith in addition to its 512 kbps SCPC VSAT connectivity. This internet facility is extensively used by the teachers, researchers and students for their academic activities. Besides, there is a fully equipped UGC sponsored Internet Centre, which is mainly used by the students, who do not have Departmental facility to access the Internet services.

## Wireless Network System

The University has also established the wireless network on the campus which has provided the Internet access faciliti to the hostels, guest house and the staff quarters.

Contact Person: Chakraborty M., Head of Computer Centre

#### (h) COMPUTER CENTRE

The University has Central Computing facilities at its Computer Centre. The Computer Centre extends required assistance to the teachers, students and Research Scholars in Computer related activities. Several DTP jobs, on request, are taken up by the Computer Centre. Good quality laser printing facility, black or colour, is available in the Computer Centre at nominal charges. The primary job of Computer Centre, however, is computerization of various activities of Administration, Finance, Academics and Examinations. The Computer Centre is also responsible for smooth maintenance of University network and Internet services.

Head: Chakraborty M., Head of Computer Centre

#### (i) IPR Unit

A Committee has been formed to examine all matters pertaining to Intellectual Property Rights of Goa University. The members of this Committee are: J. A. E. Desa (Physics), B. F. Rodrigues (Botany) and V. S. Nadkarni (Chemistry). It is currently working towards establishing a system in which all University members can be regularly advised on the patentability of their work/ideas. The unit will also set up a database of published academic work of the scholars of Goa University. In January 2006 the Mumbai Patent office awarded an Indian Patent to Goa University. The first inventor is one of the faculty members of Goa University.

#### (i) PUBLICATION UNIT

The Publication Unit compiles information pertaining to the various academic programmes and projects at the University for publication in the annual Handbook, Annual Report, and other occasional publications. The Unit also publishes a quarterly News Bulletin on the activities of Goa University. In charge: Bhatikar Rajesh, Assistant Registrar.

#### (k) CAREER COUNSELLING & PLACEMENT CELL

Goa University has established a Career Counselling & Placement Cell with a view to counsel students especially with regard to emerging careers, impart them soft skills and act as an interface between the industry and the students. The objectives of the Cell are

- 1. To disseminate information on placement avenues in academia/industry/research institutions.
- 2. To conduct training workshops soft skills with a view to prepare students for the rigours of screening tests, group discussions, personal interviews, etc.
- 3. To conduct seminars, workshops on emerging professions, professionalism, leadership, entrepreneurship, etc.
- 4. To act as an interface between industry and the students and facilitate industry-institution linkages.
- 5. To facilitate campus-based placement activity.

The Cell facilitates pre-placement and placement activity both on and off the campus and invites industrial/commercial establishments to avail the services of the Cell for campus placements. **Coordinator: Bhatikar Rajesh.**, Asst. Registrar

#### (1) NATIONAL SERVICE SCHEME (NSS)

National Service Scheme (NSS) functions under the Ministry of Human Resource Development, Government of India and Directorate of Youth Affairs, Government of Goa. The foremost aim of NSS is to motivate NSS student volunteers to undertake community development works while completing their studies. Under Goa University there are 27 NSS Units with about 8000 volunteers. Some of the important projects/activities undertaken by NSS include Disaster Management, Environment Enrichment, National Integration & Social Harmony, Water Literacy, Gender issues, etc.

Programme Co-ordinator: Nadaf F. M., DPM's Shree Mallikarjun College of Arts & Commerce, Canacona.

## (m) COLLEGE DEVELOPMENT COUNCIL

The College Development Council of Goa University is a liaison between affiliated colleges and the University Grants Commission (UGC). It makes available information to the colleges about the various grants available for development from UGC and other institutions.

**Co-ordinator: Bhanu Murthy I.,** Principal, V. V. M's Shree Damodar College of Commerce & Economics, Margao-Goa.

#### (n) STANDING COMMITTEE FOR PREVENTION OF SEXUAL HARASSMENT

A Standing Committee for prevention of Sexual Harassment of Women at work place and female students has been constituted at the University, with members drawn from the teaching faculty, student community, administration and a nominee of GSWC. The Committee works in collaboration with the Directorate of Students' Welfare (DSW) for the benefit of the students and the Centre for Women's Studies for the benefit of the female employees. Functions of the Committee relate to the prevention of sexual harassment, crisis management & mediation, redressal and reporting, in addition to the dissemination of necessary information to the needy. The students and parents can promptly get in touch with the Chairperson or the Director of DSW in case of any emergency.

Chairperson: Bhosle S., Department of Microbiology

# (o) HOSTEL ACCOMMODATION

Goa University provides hostel facility for men as well as women students on the University campus. Priority for accommodation at the University Hostels will be given to students who have enrolled for post-graduate courses at the University campus. Limited single room accommodation is also available for research students.

Requests for hostel accommodation from students of affiliated colleges will be considered only subject to availability of accommodation.

#### Mess Advance

Students residing at the University hostels shall be required to pay mess charges (towards breakfast, lunch and dinner) for Semester I/III in advance along with payment of accommodation charges for Semester II/II. Similarly, mess charges for Semester II/IV shall be paid in advance at the time of payment of accommodation charges for Semester II/IV.

The details of mess charges payable by students during Semester I/III of 2010-11 are available along with the application form for admission to the hostels.

Fee Structure		Rupees	Remarks
a.	Admission Form	25.00	
b.	Accommodation per annum	4300.00	Per student on sharing basis.
		6000.00	Single accommodation for research students only
c.	Caution Deposit	3000.00	Refundable
d.	Fine per day for late payment	10.00	
e.	Mess charges		As applicable

Application Forms for Hostel Accommodation, along with the information bulletin, may be obtained from the hostel wardens.

Wardens, Boys' Hostel Dr. M. S. Dayanand / Shri A. T. Rosa

Warden, Girls' Hostel Smt. Surekha Naik

#### P) DIRECTORATE OF STUDENTS' WELFARE AND CULTURAL AFFAIRS

The students' welfare activities of Goa University are looked after by the Directorate of Students' Welfare and Cultural Affairs.

The Directorate of Students' Welfare and Cultural Affairs looks after two associations of students: (1) Goa University Students' Council representing the students from the colleges affiliated to Goa University and postgraduate students. (2) Post Graduate Students' Union representing postgraduate students of Goa University. The students' welfare activities are conducted through these two organizations. The Directorate organizes Intercollegiate and Inter-University activities such as Youth Festivals, Workshops, Competitions, Seminars etc. in the field of art, music, dance, theatre, literature, social services etc. The students are prepared and helped for participation in students' activities organised by Universities, Government and Semi-Government institutions.

#### EARN WHILE YOU LEARN

The Directorate of Students' Welfare has introduced the "Earn while you Learn" Scheme to meet the financial needs of deserving students on the campus of Goa University.

#### STUDENTS' AID FUND

Under Students' Aid Fund, deserving students are given financial assistance to meet their expenses on tuition fee, examination fee, purchase of books, etc.

#### **PLATEAUNICA**

This is an Inter Faculty Youth Festival organised by the Post Graduate Students' Union. The festival offers an opportunity for the Post Graduate Students to exhibit their talents in the field of Art, Culture & Literature. Generally the Plateaunica is held for 2-3 days in the first week of February every year.

## STUDENTS' SAFETY INSURANCE SCHEME

All students of Post Graduate Departments and undergraduate students of affiliated colleges are insured under this scheme and the students receive insurance benefits at the time of calamities such as accident, loss of part of body, death etc.

## (q) SPORTS

The Sports Section organises Intercollegiate Championship tournaments annually, for men and women in the following events: Badminton, Table Tennis, Judo, Weight Lifting, Power Lifting, Best Physique, Chess, Cross Country, Cycling, Tennis, Tennikoit, Basketball, Swimming, Football, Athletics, Kabaddi, Handball, Hockey, Kho-Kho, Volleyball, Cricket. The winners and runners-up are awarded with trophies, medals and certificates.

Goa University deputes its teams for Inter-University championships every year. All players representing Goa University at the Inter-University Championships are given the benefit of Sports grace marks. Expenditure towards coaching camps, lodging, boarding, kit is borne by the University.

The Sports Section also conducts various intra-mural events for Post-Graduate Students. All sports activities are organised very systematically and successfully as per scheduled plan with the approval of Sports Council of Goa University.

Asst. Director of Physical Education & Sports: Fernandes M. L.

## (r) EXTRA-MURAL STUDIES AND EXTENSION SERVICES (EMS&ES)

The Directorate of Extra-Mural Studies and Extension Services was established on 20<sup>th</sup> June 1986 as per Article (5) of the Goa University Act. Extra Mural Studies and Extension Services is essentially a third dimension of Higher Education. The first two dimensions are formal teaching and research. The third dimension visualises a learning society at large. It includes adults, school drop-outs, professionals, housewives, slum population, street children and a host of learning groups who need not necessarily have a formal qualification to learn certain essential inputs.

The objectives of the Directorate are as follows: (a) To impart instruction to those who could not undergo normal education, but whose desire to be educated has remained intact. (b) To interact at all levels of education: Primary, Secondary, and Higher Secondary Non-formal education of adults, particularly women, farmers, workers and others whose understanding, skills, status etc. need to be uplifted. (c) To participate in rural development activities and to undertake action oriented research to solve local problems. (d) To make the common man aware of the impact of science and technology on daily life and to promote a scientific outlook and proper utilization of the products of science and technology. (e) To produce reading material and make it available to the people at low prices. (f) To collaborate with local voluntary organizations, industries, research institutions etc. to promote the objectives of the extra-mural studies and extension services. (g) To make people aware of their past and present history and culture and (h) To make people aware of their civil and social responsibility and obligations as well as their rights. Students who wish to help the Directorate in fulfilling its laid down aims and objectives are requested to meet the Hon. Director for further information.

Co-ordinator: Verenkar V. M. S., Department of Chemistry

### (s) HEALTH CENTRE

The University has health centre facility located at the shopping complex. This is open to all the students as well as Staff (also families) and is open on all working days during 9.00 –12.00 hrs and 15.00-17.00 hrs.

Medical Officer: Sequeira P.

#### (t) GOA UNIVERSITY CONSUMER CO-OPERATIVE SOCIETY LTD., GOA. (GUCCS LTD.)

The Society has been registered with the Registrar of Co-operative Societies, Govt. of Goa. The main objectives of the Society are to encourage thrift, self-help and cooperation among members of the Society to sell daily requirements of life/operations to the members and others and to act as agent for joint purchase of domestic and other requirements of the members and to undertake activities for promotion of economic, social and cultural welfare of its members. The membership is open to all permanent employees (teaching and non-teaching) of Goa University and all post graduate students of Goa University including research scholars and fellows as individual members. Each post graduate student will pay a non-refundable membership fee of Rs. 50/- and entrance fee of Rs. 25/- to become a member of the Society at the time of admission to the University.

The President of Post Graduate Students Union of Goa University will represent the student members in the Board of Directors of the Goa University Consumer Co-operative Society. A copy of the byelaws of the Society and the list of promoters are available at the library counter.

Chairman: Chachadi A. G., Department of Earth Science Secretary: Chari Dilip.

#### (u) GOA UNIVERSITY ALUMNI ASSOCIATION, GOA (GUAAG)

Goa University has started an association for Post Graduate alumni named as GOA UNIVERSITY ALUMNI ASSOCIATION GOA (GUAAG). This is a registered body and enrols ex-students of Goa University as well as the erstwhile Centre of Post Graduate Instruction and Research (CPIR) as life members with a membership fee of Rs. 250/- only. The main aim of the Association is to create and develop a healthy co-operation between Goa University and the community in general.

Contact Person: Caldeira N., Department of English

#### (v) UGC NET & SET

The National Educational Testing Bureau of University Grants Commission (UGC) conducts National Eligibility Test (NET) to determine eligibility for lectureship and for award of Junior Research Fellowship (JRF) for Indian nationals in order to ensure minimum standards for the entrants in the teaching profession and research. The test is conducted in humanities (including languages), Social Sciences, Forensic Sciences, Environment Sciences, Computer Science and Applications and Electronic Science.

The UGC – National Eligibility Tests are conducted twice in a year, generally in the months of June and December. The notifications announcing the June and December examinations and the procedure for applying for UGC – NET are published in the months of March and September respectively in the weekly journal of nation—wide circulation, viz, *Employment News* and is also uploaded on the UGC website www.ugc.ac.in. The result of June, UGC-NET is declared generally in the month of October. Similarly December UGC-NET result is usually declared in the month of April. Goa University is also one of the Centres for the conduct of UGC-NET. Similarly, Goa University is also a designated centre for the Maharashtra and Goa State Level Eligibility Test (SET) conducted by University of Pune as the State Agency accredited by UGC.

Co-ordinator: Vishwanath T. A., Department of Earth Science

#### (w) OTHER FACILITIES

Over the years, the University has developed several facilities for the benefit of the University community. In addition to canteens located at various points in the campus, full-fledged branch of State Bank of India along with ATM facility, stationery store, general store, etc. have been located at the Campus. The University also has a Guest House and an International Guest House, for the benefit of visiting faculty and other guests

# UGC REGULATIONS ON CURBING THE MENACE OF RAGGING IN HIGHER EDUCATIONAL INSTITUTIONS, 2009.

(under Section 26 (1)(g) of the University Grants Commission Act, 1956)

#### **PREAMBLE**

In view of the directions of the Hon'ble Supreme Court in the matter of "University of Kerala v/s. Council, Principals, Colleges and others" in SLP no. 24295 of 2006 dated 16.05.2007 and that dated 8.05.2009 in Civil Appeal number 887 of 2009, and in consideration of the determination of the Central Government and the University Grants Commission to prohibit, prevent and eliminate the scourge of ragging including any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student, or indulging in rowdy or indisciplined activities by any student or students which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in any fresher or any other student or asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment or embarrassment so as to adversely affect the physique or psyche of such fresher or any other student, with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student, in all higher education institutions in the country, and thereby, to provide for the healthy development, physically and psychologically, of all students, the University Grants Commission, in consultation with the Councils, brings forth this Regulation. In exercise of the powers conferred by Clause (g) of sub-section (1) of Section 26 of the University Grants Commission Act, 1956, the University Grants Commission hereby makes the following Regulations, namely;

#### 1. Title, commencement and applicability.-

- 1.1 These regulations shall be called the "UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009".
- 1.2 They shall come into force from the date of their publication in the Official Gazette.
- 1.3 They shall apply to all the institutions coming within the definition of an University under sub-section (f) of section (2) of the University Grants Commission Act, 1956, and to all institutions deemed to be a university under Section 3 of the University Grants Commission Act, 1956, to all other higher educational institutions, or elements of such universities or institutions, including its departments, constituent units and all the premises, whether being academic, residential, playgrounds, canteen, or other such premises of such universities, deemed universities and higher educational institutions, whether located within the campus or outside, and to all means of transportation of students, whether public or private, accessed by students for the pursuit of studies in such universities, deemed universities and higher educational institutions.

#### 2. Objectives.-

To prohibit any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student, or indulging in rowdy or indisciplined activities by any student or students which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in any fresher or any other student or asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment or embarrassment so as to adversely affect the physique or psyche of such fresher or any other student, with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student; and thereby, to eliminate ragging in all its forms from universities, deemed universities and other higher educational institutions in the country by prohibiting it under these Regulations, preventing its occurrence and punishing those who indulge in ragging as provided for in these Regulations and the appropriate law in force.

#### 3. What constitutes Ragging.- Ragging constitutes one or more of any of the following acts:

- a. any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student;
- indulging in rowdy or indisciplined activities by any student or students which causes or is likely to cause annoyance, hardship, physical or psychological harm or to raise fear or apprehension thereof in any fresher or any other student;
- asking any student to do any act which such student will not in the ordinary course do and which has the effect of
  causing or generating a sense of shame, or torment or embarrassment so as to adversely affect the physique or psyche
  of such fresher or any other student;
- d. any act by a senior student that prevents, disrupts or disturbs the regular academic activity of any other student or a fresher;
- e. exploiting the services of a fresher or any other student for completing the academic tasks assigned to an individual or a group of students.
- f. any act of financial extortion or forceful expenditure burden put on a fresher or any other student by students;
- g. any act of physical abuse including all variants of it: sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts, gestures, causing bodily harm or any other danger to health or person;
- h. any act or abuse by spoken words, emails, post, public insults which would also include deriving perverted pleasure, vicarious or sadistic thrill from actively or passively participating in the discomfiture to fresher or any other student;
- i. any act that affects the mental health and self-confidence of a fresher or any other student with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student.

#### 4. Definitions.-

- In these regulations unless the context otherwise requires,
  - a) "Act" means, the University Grants Commission Act, 1956 (3 of 1956);
  - b) "Academic year" means the period from the commencement of admission of students in any course of study in the institution up to the completion of academic requirements for that particular year.
  - c) "Anti-Ragging Helpline" means the Helpline established under clause (a) of Regulation 8.1 of these Regulations.
  - d) "Commission" means the University Grants Commission;
  - e) "Council" means a body so constituted by an Act of Parliament or an Act of any State Legislature for setting, or co-ordinating or maintaining standards in the relevant areas of higher education, such as the All India Council for Technical Education (AICTE), the Bar Council of India (BCI), the Dental Council of India (DCI), the Distance Education Council (DEC), the Indian Council of Agricultural Research (ICAR), the Indian Nursing Council (INC), the Medical Council of India (MCI), the National Council for Teacher Education (NCTE), the Pharmacy Council of India (PCI), etc. and the State Higher Education Councils.
  - f) "District Level Anti-Ragging Committee" means the Committee, headed by the District Magistrate, constituted by the State Government, for the control and elimination of ragging in institutions within the jurisdiction of the district.
  - g) "Head of the institution" means the Vice-Chancellor in case of a university or a deemed to be university, the Principal or the Director or such other designation as the executive head of the institution or the college is referred.
  - h) "Fresher" means a student who has been admitted to an institution and who is undergoing his/her first year of study in such institution.
  - i) "Institution" means a higher educational institution including, but not limited to an university, a deemed to be university, a college, an institute, an institution of national importance set up by an Act of Parliament or a constituent unit of such institution, imparting higher education beyond 12 years of schooling leading to, but not necessarily culminating in, a degree (graduate, postgraduate and/or higher level) and/or to a university diploma.
  - j) "NAAC" means the National Academic and Accreditation Council established by the Commission under section 12(ccc) of the Act;
  - k) "State Level Monitoring Cell" means the body constituted by the State Government for the control and elimination of ragging in institutions within the jurisdiction of the State, established under a State Law or on the advice of the Central Government, as the case may be.
- (2) Words and expressions used and not defined herein but defined in the Act or in the General Clauses Act, 1897, shall have the meanings respectively assigned to them in the Act or in the General Clauses Act, 1897, as the case may be.

#### 5. Measures for prohibition of ragging at the institution level:-

- a) No institution or any part of it thereof, including its elements, including, but not limited to, the departments, constituent units, colleges, centres of studies and all its premises, whether academic, residential, playgrounds, or canteen, whether located within the campus or outside, and in all means of transportation of students, whether public or private, accessed by students for the pursuit of studies in such institutions, shall permit or condone any reported incident of ragging in any form; and all institutions shall take all necessary and required measures, including but not limited to the provisions of these Regulations, to achieve the objective of eliminating ragging, within the institution or outside.
- b) All institutions shall take action in accordance with these Regulations against those found guilty of ragging and/or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.

#### 6 Measures for prevention of ragging at the institution level.-

- 6.1 An institution shall take the following steps in regard to admission or registration of students; namely,
  - a) Every public declaration of intent by any institution, in any electronic, audiovisual or print or any other media, for admission of students to any course of study shall expressly provide that ragging is totally prohibited in the institution, and anyone found guilty of ragging and/or abetting ragging, whether actively or passively, or being a part of a conspiracy to promote ragging, is liable to be punished in accordance with these Regulations as well as under the provisions of any penal law for the time being in force.
  - b) The brochure of admission/instruction booklet or the prospectus, whether in print or electronic format, shall prominently print these Regulations in full. Provided that the institution shall also draw attention to any law concerning ragging and its consequences, as may be applicable to the institution publishing such brochure of admission/instruction booklet or the prospectus. Provided further that the telephone numbers of the Anti-Ragging Helpline and all the important functionaries in the institution, including but not limited to the Head of the institution, faculty members, members of the Anti-Ragging Committees and Anti-Ragging Squads, District and Sub-Divisional authorities, Wardens of hostels, and other functionaries or authorities where relevant, shall be published in the brochure of admission/instruction booklet or the prospectus.
  - c) Where an institution is affiliated to a University and publishes a brochure of admission/instruction booklet or a prospectus, the affiliating university shall ensure that the affiliated institution shall comply with the provisions of clause (a) and clause (b) of Regulation 6.1 of these Regulations.
  - d) The application form for admission, enrolment or registration shall contain an affidavit, mandatorily in English and in Hindi and/or in one of the regional languages known to the applicant, as provided in the English language in Annexure I to these Regulations, to be filled up and signed by the applicant to the effect that he/she

has read and understood the provisions of these Regulations as well as the provisions of any other law for the time being in force, and is aware of the prohibition of ragging and the punishments prescribed, both under penal laws as well as under these Regulations and also affirm to the effect that he/she has not been expelled and/or debarred by any institution and further aver that he/she would not indulge, actively or passively, in the act or abet the act of ragging and if found guilty of ragging and/or abetting ragging, is liable to be proceeded against under these Regulations or under any penal law or any other law for the time being in force and such action would include but is not limited to debarment or expulsion of such student.

- e) The application form for admission, enrolment or registration shall contain an affidavit, mandatorily in English and in Hindi and/or in one of the regional languages known to the parents/guardians of the applicant, as provided in the English language in Annexure I to these Regulations, to be filled up and signed by the parents/guardians of the applicant to the effect that he/she has read and understood the provisions of these Regulations as well as the provisions of any other law for the time being in force, and is aware of the prohibition of ragging and the punishments prescribed, both under penal laws as well as under these Regulations and also affirm to the effect that his/her ward has not been expelled and/or debarred by any institution and further aver that his/her ward would not indulge, actively or passively, in the act or abet the act of ragging and if found guilty of ragging and/or abetting ragging, his/her ward is liable to be proceeded against under these Regulations or under any penal law or any other law for the time being in force and such action would include but is not limited to debarment or expulsion of his/her ward.
- f) The application for admission shall be accompanied by a document in the form of, or annexed to, the School Leaving Certificate/Transfer Certificate/Migration Certificate/Character Certificate reporting on the interpersonal/social behavioural pattern of the applicant, to be issued by the school or institution last attended by the applicant, so that the institution can thereafter keep watch on the applicant, if admitted, whose behaviour has been commented in such document.
- g) A student seeking admission to a hostel forming part of the institution, or seeking to reside in any temporary premises not forming part of the institution, including a private commercially managed lodge or hostel, shall have to submit additional affidavits countersigned by his/her parents/guardians in the form prescribed in Annexure I and Annexure II to these Regulations respectively along with his/her application.
- h) Before the commencement of the academic session in any institution, the Head of the Institution shall convene and address a meeting of various functionaries/agencies, such as Hostel Wardens, representatives of students, parents/ guardians, faculty, district administration including the police, to discuss the measures to be taken to prevent ragging in the institution and steps to be taken to identify those indulging in or abetting ragging and punish them.
- The institution shall, to make the community at large and the students in particular aware of the dehumanizing effect of ragging, and the approach of the institution towards those indulging in ragging, prominently display posters depicting the provisions of penal law applicable to incidents of ragging, and the provisions of these Regulations and also any other law for the time being in force, and the punishments thereof, shall be prominently displayed on Notice Boards of all departments, hostels and other buildings as well as at places, where students normally gather and at places, known to be vulnerable to occurrences of ragging incidents.
- j) The institution shall request the media to give adequate publicity to the law prohibiting ragging and the negative aspects of ragging and the institution's resolve to ban ragging and punish those found guilty without fear or favour.
- k) The institution shall identify, properly illuminate and keep a close watch on all locations known to be vulnerable to occurrences of ragging incidents.
- l) The institution shall tighten security in its premises, especially at vulnerable places and intense policing by Anti-Ragging Squad, referred to in these Regulations and volunteers, if any, shall be resorted to at such points at odd hours during the first few months of the academic session.
- m) The institution shall utilize the vacation period before the start of the new academic year to launch a publicity campaign against ragging through posters, leaflets and such other means, as may be desirable or required, to promote the objectives of these Regulations.
- n) The faculties/departments/units of the institution shall have induction arrangements, including those which anticipate, identify and plan to meet any special needs of any specific section of students, in place well in advance of the beginning of the academic year with an aim to promote the objectives of this Regulation.
- o) Every institution shall engage or seek the assistance of professional counsellors before the commencement of the academic session, to be available when required by the institution, for the purposes of offering counselling to freshers and to other students after the commencement of the academic year.
- p) The head of the institution shall provide information to the local police and local authorities, the details of every privately commercially managed hostels or lodges used for residential purposes by students enrolled in the institution and the head of the institution shall also ensure that the Anti-Ragging Squad shall ensure vigil in such locations to prevent the occurrence of ragging therein.
- 6.2 An institution shall, on admission or enrolment or registration of students, take the following steps, namely;
  - Every fresh student admitted to the institution shall be given a printed leaflet detailing to whom he/she has to turn to for help and guidance for various purposes including addresses and telephone numbers, so as to enable the student to contact the concerned person at any time, if and when required, of the Anti-Ragging Helpline referred to in these Regulations, Wardens, Head of the institution, all members of the anti-ragging squads and committees, relevant district and police authorities.

- b) The institution, through the leaflet specified in clause (a) of Regulation 6.2 of these Regulations shall explain to the freshers, the arrangements made for their induction and orientation which promote efficient and effective means of integrating them fully as students with those already admitted o the institution in earlier years.
- c) The leaflet specified in clause (a) of Regulation 6.2 of these Regulations shall inform the freshers about their rights as bona fide students of the institution and clearly instructing them that they should desist from doing anything, with or against their will, even if ordered to by the seniors students, and that any attempt of ragging shall be promptly reported to the Anti-ragging Squad or to the Warden or to the Head of the institution, as the case may be.
- d) The leaflet specified in clause (a) of Regulation 6.2 of these Regulations shall contain a calendar of events and activities laid down by the institution to facilitate and complement familiarization of freshers with the academic environment of the institution.
- e) The institution shall, on the arrival of senior students after the first week or after the second week, as the case may be, schedule orientation programmes as follows, namely; (i) joint sensitization programme and counselling of both freshers and senior students by a professional counsellor, referred to in clause (o) of Regulation 6.1 of these Regulations; (ii) joint orientation programme of freshers and seniors to be addressed by the Head of the institution and the anti-ragging committee; (iii) organization on a large scale of cultural, sports and other activities to provide a platform for the freshers and seniors to interact in the presence of faculty members; (iv) in the hostel, the warden should address all students; and may request two junior colleagues from the college faculty to assist the warden by becoming resident tutors for a temporary duration. (v) as far as possible faculty members should dine with the hostel residents in their respective hostels to instil a feeling of confidence among the freshers.
- f) The institution shall set up appropriate committees, including the course-incharge, student advisor, Wardens and some senior students as its members, to actively monitor, promote and regulate healthy interaction between the freshers, junior students and senior students.
- g) Freshers or any other student(s), whether being victims, or witnesses, in any incident of ragging, shall be encouraged to report such occurrence, and the identity of such informants shall be protected and shall not be subject to any adverse consequence only for the reason for having reported such incidents.
- h) Each batch of freshers, on arrival at the institution, shall be divided into small groups and each such group shall be assigned to a member of the faculty, who shall interact individually with each member of the group every day for ascertaining the problems or difficulties, if any, faced by the fresher in the institution and shall extend necessary help to the fresher in overcoming the same.
- i) It shall be the responsibility of the member of the faculty assigned to the group of freshers, to coordinate with the Wardens of the hostels and to make surprise visits to the rooms in such hostels, where a member or members of the group are lodged; and such member of faculty shall maintain a diary of his/her interaction with the freshers under his/her charge.
- j) Freshers shall be lodged, as far as may be, in a separate hostel block, and where such facilities are not available, the institution shall ensure that access of seniors to accommodation allotted to freshers is strictly monitored by wardens, security guards and other staff of the institution.
- k) A round the clock vigil against ragging in the hostel premises, in order to prevent ragging in the hostels after the classes are over, shall be ensured by the institution.
- It shall be the responsibility of the parents/guardians of freshers to promptly bring any instance of ragging to the notice of the Head of the Institution.
- m) Every student studying in the institution and his/her parents/guardians shall provide the specific affidavits required under clauses (d), (e) and (g) of Regulation 6.1 of these Regulations at the time of admission or registration, as the case may be, during each academic year.
- n) Every institution shall obtain the affidavit from every student as referred to above in clause (m) of Regulation 6.2 and maintain a proper record of the same and to ensure its safe upkeep thereof, including maintaining the copies of the affidavit in an electronic form, to be accessed easily when required either by the Commission or any of the Councils or by the institution or by the affiliating University or by any other person or organisation authorised to do so.
- o) Every student at the time of his/her registration shall inform the institution about his/her place of residence while pursuing the course of study, and in case the student has not decided his/her place of residence or intends to change the same, the details of his place of residence shall be provided immediately on deciding the same; and specifically in regard to a private commercially managed lodge or hostel where he/she has taken up residence.
- p) The Head of the institution shall, on the basis of the information provided by the student under clause (o) of Regulation 6.2, apportion sectors to be assigned to members of the faculty, so that such member of faculty can maintain vigil and report any incident of ragging outside the campus or en route while commuting to the institution using any means of transportation of students, whether public or private.
- q) The Head of the institution shall, at the end of each academic year, send a letter to the parents/guardians of the students who are completing their first year in the institution, informing them about these Regulations and any law for the time being in force prohibiting ragging and the punishments thereof as well as punishments prescribed under the penal laws, and appealing to them to impress upon their wards to desist from indulging in ragging on their return to the institution at the beginning of the academic session next.

- 6.3 Every institution shall constitute the following bodies; namely,
  - Every institution shall constitute a Committee to be known as the Anti-Ragging Committee to be nominated and headed by the Head of the institution, and consisting of representatives of civil and police administration, local media, Non-Government Organizations involved in youth activities, representatives of faculty members, representatives of parents, representatives of students belonging to the freshers' category as well as senior students, non-teaching staff; and shall have a diverse mix of membership in terms of levels as well as gender.
  - b) It shall be the duty of the Anti-Ragging Committee to ensure compliance with the provisions of these Regulations as well as the provisions of any law for the time being in force concerning ragging; and also to monitor and oversee the performance of the Anti-Ragging Squad in prevention of ragging in the institution.
  - c) Every institution shall also constitute a smaller body to be known as the Anti-Ragging Squad to be nominated by the Head of the Institution with such representation as may be considered necessary for maintaining vigil, oversight and patrolling functions and shall remain mobile, alert and active at all times. Provided that the Anti-Ragging Squad shall have representation of various members of the campus community and shall have no outside representation.
  - d) It shall be the duty of the Anti-Ragging Squad to be called upon to make surprise raids on hostels, and other places vulnerable to incidents of, and having the potential of, ragging and shall be empowered to inspect such places.
  - e) It shall also be the duty of the Anti-Ragging Squad to conduct an on-the-spot enquiry into any incident of ragging referred to it by the Head of the institution or any member of the faculty or any member of the staff or any student or any parent or guardian or any employee of a service provider or by any other person, as the case may be; and the enquiry report along with recommendations shall be submitted to the Anti-Ragging Committee for action under clause (a) of Regulation 9.1. Provided that the Anti-Ragging Squad shall conduct such enquiry observing a fair and transparent procedure and the principles of natural justice and after giving adequate opportunity to the student or students accused of ragging and other witnesses to place before it the facts, documents and views concerning the incident of ragging, and considering such other relevant information as may be required.
  - f) Every institution shall, at the end of each academic year, in order to promote the objectives of these Regulations, constitute a Mentoring Cell consisting of students volunteering to be Mentors for freshers, in the succeeding academic year; and there shall be as many levels or tiers of Mentors as the number of batches in the institution, at the rate of one Mentor for six freshers and one Mentor of a higher level for six Mentors of the lower level.
  - g) Every University shall constitute a body to be known as Monitoring Cell on Ragging, which shall coordinate with the affiliated colleges and institutions under the domain of the University to achieve the objectives of these Regulations; and the Monitoring Cell shall call for reports from the Heads of institutions in regard to the activities of the Anti-Ragging Committees, Anti Ragging Squads, and the Mentoring Cells at the institutions, and it shall also keep itself abreast of the decisions of the District level Anti-Ragging Committee headed by the District Magistrate.
  - h) The Monitoring Cell shall also review the efforts made by institutions to publicize anti-ragging measures, soliciting of affidavits from parents/guardians and from students, each academic year, to abstain from ragging activities or willingness to be penalized for violations; and shall function as the prime mover for initiating action on the part of the appropriate authorities of the university for amending the Statutes or Ordinances or Bye-laws to facilitate the implementation of anti-ragging measures at the level of the institution.

#### 6.4 Every institution shall take the following other measures, namely;

- a) Each hostel or a place where groups of students reside, forming part of the institution, shall have a full-time Warden, to be appointed by the institution as per the eligibility criteria laid down for the post reflecting both the command and control aspects of maintaining discipline and preventing incidents of ragging within the hostel, as well as the softer skills of counselling and communicating with the youth outside the class-room situation; and who shall reside within the hostel, or at the very least, in the close vicinity thereof.
- b) The Warden shall be accessible at all hours and be available on telephone and other modes of communication, and for the purpose the Warden shall be provided with a mobile phone by the institution, the number of which shall be publicised among all students residing in the hostel.
- c) The institution shall review and suitably enhance the powers of Wardens; and the security personnel posted in hostels shall be under the direct control of the Warden and their performance shall be assessed by them.
- d) The professional counsellors referred to under clause (o) of Regulation 6.1 of these Regulations shall, at the time of admission, counsel freshers and/or any other student(s) desiring counselling, in order to prepare them for the life ahead, particularly in regard to the life in hostels and to the extent possible, also involve parents and teachers in the counselling sessions.
- e) The institution shall undertake measures for extensive publicity against ragging by means of audio-visual aids, counselling sessions, workshops, painting and design competitions among students and such other measures, as it may deem fit.
- f) In order to enable a student or any person to communicate with the Anti-Ragging Helpline, every institution shall permit unrestricted access to mobile phones and public phones in hostels and campuses, other than in class-rooms, seminar halls, library, and in such other places that the institution may deem it necessary to restrict the use of phones.

- g) The faculty of the institution and its non-teaching staff, which includes but is not limited to the administrative staff, contract employees, security guards and employees of service providers providing services within the institution, shall be sensitized towards the ills of ragging, its prevention and the consequences thereof.
- h) The institution shall obtain an undertaking from every employee of the institution including all teaching and non-teaching members of staff, contract labour employed in the premises either for running canteen or as watch and ward staff or for cleaning or maintenance of the buildings/lawns and employees of service providers providing services within the institution, that he/she would report promptly any case of ragging which comes to his/her notice.
- i) The institution shall make a provision in the service rules of its employees for issuing certificates of appreciation to such members of the staff who report incidents of ragging, which will form part of their service record.
- The institution shall give necessary instructions to the employees of the canteens and messing, whether that of the institution or that of a service provider providing this service, or their employers, as the case may be, to keep a strict vigil in the area of their work and to report the incidents of ragging to the Head of the institution or members of the Anti-Ragging Squad or members of the Anti-Ragging Committee or the Wardens, as may be required.
- k) All Universities awarding a degree in education at any level, shall be required to ensure that institutions imparting instruction in such courses or conducting training programme for teachers include inputs relating to anti-ragging and the appreciation of the relevant human rights, as well as inputs on topics regarding sensitization against corporal punishments and checking of bullying amongst students, so that every teacher is equipped to handle at least the rudiments of the counselling approach.
- Discreet random surveys shall be conducted amongst the freshers every fortnight during the first three months of the academic year to verify and crosscheck whether the institution is indeed free of ragging or not and for the purpose the institution may design its own methodology of conducting such surveys.
- m) The institution shall cause to have an entry, apart from those relating to general conduct and behaviour, made in the Migration/Transfer Certificate issued to the student while leaving the institution, as to whether the student has been punished for committing or abetting an act of ragging, as also whether the student has displayed persistent violent or aggressive behaviour or any inclination to harm others, during his course of study in the institution.
- n) Notwithstanding anything contained in these Regulations with regard to obligations and responsibilities pertaining to the authorities or members of bodies prescribed above, it shall be the general collective responsibility of all levels and sections of authorities or functionaries including members of the faculty and employees of the institution, whether regular or temporary, and employees of service providers providing service within the institution, to prevent or to act promptly against the occurrence of ragging or any incident of ragging which comes to their notice.
- o) The Heads of institutions affiliated to a University or a constituent of the University, as the case may be, shall, during the first three months of an academic year, submit a weekly report on the status of compliance with Anti-Ragging measures under these Regulations, and a monthly report on such status thereafter, to the Vice-Chancellor of the University to which the institution is affiliated to or recognized by.
- p) The Vice Chancellor of each University, shall submit fortnightly reports of the University, including those of the Monitoring Cell on Ragging in case of an affiliating university, to the State Level Monitoring Cell.
- 7. Action to be taken by the Head of the institution.- On receipt of the recommendation of the Anti Ragging Squad or on receipt of any information concerning any reported incident of ragging, the Head of institution shall immediately determine if a case under the penal laws is made out and if so, either on his own or through a member of the Anti-Ragging Committee authorised by him in this behalf, proceed to file a First Information Report (FIR), within twenty four hours of receipt of such information or recommendation, with the police and local authorities, under the appropriate penal provisions relating to one or more of the following, namely;
  - i. Abetment to ragging;
  - ii. Criminal conspiracy to rag;
  - iii. Unlawful assembly and rioting while ragging;
  - iv. Public nuisance created during ragging;
  - v. Violation of decency and morals through ragging;
  - vi. Injury to body, causing hurt or grievous hurt;
  - vii. Wrongful restraint;
  - viii. Wrongful confinement;
  - ix. Use of criminal force;
  - x. Assault as well as sexual offences or unnatural offences;
  - xi. Extortion;
  - xii. Criminal trespass;
  - xiii. Offences against property;
  - xiv. Criminal intimidation;
  - xv. Attempts to commit any or all of the above mentioned offences against the victim(s);
  - xvi. Threat to commit any or all of the above mentioned offences against the victim(s);
  - xvii. Physical or psychological humiliation;
  - xviii. All other offences following from the definition of "Ragging".

Provided that the Head of the institution shall forthwith report the occurrence of the incident of ragging to the District Level Anti-Ragging Committee and the Nodal officer of the affiliating University, if the institution is an affiliated institution. Provided further that the institution shall also continue with its own enquiry initiated under clause 9 of these Regulations and other measures without waiting for action on the part of the police/local authorities and such remedial action shall be initiated and completed immediately and in no case later than a period of seven days of the reported occurrence of the incident of ragging.

#### 8. Duties and Responsibilities of the Commission and the Councils.-

- 8.1 The Commission shall, with regard to providing facilitating communication of information regarding incidents of ragging in any institution, take the following steps, namely;
  - a) The Commission shall establish, fund and operate, a toll-free Anti-Ragging Helpline, operational round the clock, which could be accessed by students in distress owing to ragging related incidents.
  - b) Any distress message received at the Anti-Ragging Helpline shall be simultaneously relayed to the Head of the Institution, the Warden of the Hostels, the Nodal Officer of the affiliating University, if the incident reported has taken place in an institution affiliated to a University, the concerned District authorities and if so required, the District Magistrate, and the Superintendent of Police, and shall also be web enabled so as to be in the public domain simultaneously for the media and citizens to access it.
  - c) The Head of the institution shall be obliged to act immediately in response to the information received from the Anti-Ragging Helpline as at sub-clause (b) of this clause.
  - d) The telephone numbers of the Anti-Ragging Helpline and all the important functionaries in every institution, Heads of institutions, faculty members, members of the anti-ragging committees and anti-ragging squads, district and sub-divisional authorities and state authorities, Wardens of hostels, and other functionaries or authorities where relevant, shall be widely disseminated for access or to seek help in emergencies.
  - e) The Commission shall maintain an appropriate data base to be created out of affidavits, affirmed by each student and his/her parents/guardians and stored electronically by the institution, either on its or through an agency to be designated by it; and such database shall also function as a record of ragging complaints received, and the status of the action taken thereon.
  - f) The Commission shall make available the database to a non-governmental agency to be nominated by the Central Government, to build confidence in the public and also to provide information of non compliance with these Regulations to the Councils and to such bodies as may be authorised by the Commission or by the Central Government.

#### 8.2 The Commission shall take the following regulatory steps, namely;

- a) The Commission shall make it mandatory for the institutions to incorporate in their prospectus, the directions of the Central Government or the State Level Monitoring Committee with regard to prohibition and consequences of ragging, and that non-compliance with these Regulations and directions so provided, shall be considered as lowering of academic standards by the institution, therefore making it liable for appropriate action.
- b) The Commission shall verify that the institutions strictly comply with the requirement of getting the affidavits from the students and their parents/guardians as envisaged under these Regulations.
- c) The Commission shall include a specific condition in the Utilization Certificate, in respect of any financial assistance or grants-in-aid to any institution under any of the general or special schemes of the Commission that the institution has complied with the anti-ragging measures.
- d) Any incident of ragging in an institution shall adversely affect its accreditation, ranking or grading by NAAC or by any other authorised accreditation agencies while assessing the institution for accreditation, ranking or grading purposes.
- e) The Commission may accord priority in financial grants-in-aid to those institutions, otherwise eligible to receive grants under section 12B of the Act, which report a blemishless record in terms of there being no reported incident of ragging.
- f) The Commission shall constitute an Inter-Council Committee, consisting of representatives of the various Councils, the Non-Governmental agency responsible for monitoring the database maintained by the Commission under clause (g) of Regulation 8.1 and such other bodies in higher education, to coordinate and monitor the anti-ragging measures in institutions across the country and to make recommendations from time to time; and shall meet at least once in six months each year.
- g) The Commission shall institute an Anti-Ragging Cell within the Commission as an institutional mechanism to provide secretarial support for collection of information and monitoring, and to coordinate with the State Level Monitoring Cell and University level Committees for effective implementation of anti-ragging measures, and the Cell shall also coordinate with the Non-Governmental agency responsible for monitoring the database maintained by the Commission appointed under clause (g) of Regulation 8.1.

#### 9. Administrative action in the event of ragging.-

- 9.1 The institution shall punish a student found guilty of ragging after following the procedure and in the manner prescribed hereinunder:
  - a) The Anti-Ragging Committee of the institution shall take an appropriate decision, in regard to punishment or otherwise, depending on the facts of each incident of ragging and nature and gravity of the incident of ragging established in the recommendations of the Anti-Ragging Squad.

- b) The Anti-Ragging Committee may, depending on the nature and gravity of the guilt established by the Anti-Ragging Squad, award, to those found guilty, one or more of the following punishments, namely;
  - i. Suspension from attending classes and academic privileges.
  - ii. Withholding/ withdrawing scholarship/ fellowship and other benefits.
  - iii. Debarring from appearing in any test/ examination or other evaluation process.
  - iv. Withholding results.
  - v. Debarring from representing the institution in any regional, national or international meet, tournament, youth festival, etc.
  - vi. Suspension/ expulsion from the hostel.
  - vii. Cancellation of admission.
  - viii. Rustication from the institution for period ranging from one to four semesters.
  - ix. Expulsion from the institution and consequent debarring from admission to any other institution for a specified period. Provided that where the persons committing or abetting the act of ragging are not identified, the institution shall resort to collective punishment.
- c) An appeal against the order of punishment by the Anti-Ragging Committee shall lie,
  - i. in case of an order of an institution, affiliated to or constituent part, of a University, to the Vice-Chancellor of the University;
  - ii. in case of an order of a University, to its Chancellor.
  - iii. in case of an institution of national importance created by an Act of Parliament, to the Chairman or Chancellor of the institution, as the case may be.
- 9.2 Where an institution, being constituent of, affiliated to or recognized by a University, fails to comply with any of the provisions of these Regulations or fails to curb ragging effectively, such University may take any one or more of the following actions, namely;
  - i. Withdrawal of affiliation/recognition or other privileges conferred.
  - ii. Prohibiting such institution from presenting any student or students then undergoing any programme of study therein for the award of any degree/diploma of the University.
    - Provided that where an institution is prohibited from presenting its student or students, the Commission shall make suitable arrangements for the other students so as to ensure that such students are able to pursue their academic studies.
  - iii. Withholding grants allocated to it by the university, if any
  - iv. Withholding any grants chanellised through the university to the institution.
  - v. Any other appropriate penalty within the powers of the university.
- 9.3 Where in the opinion of the appointing authority, a lapse is attributable to any member of the faulty or staff of the institution, in the matter of reporting or taking prompt action to prevent an incident of ragging or who display an apathetic or insensitive attitude towards complaints of ragging, or who fail to take timely steps, whether required under these Regulations or otherwise, to prevent an incident or incidents of ragging, then such authority shall initiate departmental disciplinary action, in accordance with the prescribed procedure of the institution, against such member of the faulty or staff.
  - Provided that where such lapse is attributable to the Head of the institution, the authority designated to appoint such Head shall take such departmental disciplinary action; and such action shall be without prejudice to any action that may be taken under the penal laws for abetment of ragging for failure to take timely steps in the prevention of ragging or punishing any student found guilty of ragging.
- 9.4 The Commission shall, in respect of any institution that fails to take adequate steps to prevent ragging or fails to act in accordance with these Regulations or fails to punish perpetrators or incidents of ragging suitably, take one of more of the following measures, namely;
  - i. Withdrawal of declaration of fitness to receive grants under section 12B of the Act.
  - ii. Withholding any grant allocated.
  - iii. Declaring the institution ineligible for consideration for any assistance under any of the general or special assistance programmes of the Commission.
  - iv. Informing the general public, including potential candidates for admission, through a notice displayed prominently in the newspapers or other suitable media and posted on the website of the Commission, declaring that the institution does not possess the minimum academic standards.
  - v. Taking such other action within its powers as it may deem fit and impose such other penalties as may be provided in the Act for such duration of time as the institution complies with the provisions of these Regulations.
    - Provided that the action taken under this clause by the Commission against any institution shall be shared with all Councils.

(Dr. R.K. Chauhan) Secretary

# ANNEXURE I

# AFFIDAVIT BY THE STUDENT

I,				
	(full name of student with admission/registration/enrolment number)			
havi of I	/ d/o Mr./Mrs./Ms			
2)	I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.			
3)	I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.			
4)	I hereby solemnly aver and undertake that			
	a) I will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.			
	b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.			
5)	I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.			
6)	I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.			
Dec	clared thisday of month ofyear.			
Sign	nature of the deponent			
Nan	me:			
	VERIFICATION			
	ified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is and nothing has been concealed or misstated therein.			
Ver	ified at (place) on this the (day) of (month) , (year ).			
Sign	nature of the deponent			
	emnly affirmed and signed in my presence on this the (day) of (month) , r) after reading the contents of this affidavit.			

OATH COMMISSIONER

# ANNEXURE II

# AFFIDAVIT BY PARENT/GUARDIAN

I, M	Ir./Mrs./Ms
,	(full name of parent/guardian) father/mother/guardian of,
	(full name of student with admission/registration/enrolment number),
of l	ing been admitted to Goa University, have received a copy of the UGC Regulations on Curbing the Menace Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations"), carefully read and y understood the provisions contained in the said Regulations.
2)	I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3)	I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against my ward in case my ward is found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
4)	I hereby solemnly aver and undertake that
	a) My ward will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
	b) My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
5)	I hereby affirm that, if found guilty of ragging, my ward shall be liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.
6)	I hereby declare that my ward has not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my ward's admission is liable to be cancelled.
Dec	clared thisday of month ofyear.
Nar Ado	nature of the deponent me: dress: ephone/ Mobile No.:
	<b>VERIFICATION</b> ified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is e and nothing has been concealed or misstated therein.
Ver	ified at (place) on this the (day) of (month) , (year ).
Sign	nature of the deponent
	emnly affirmed and signed in my presence on this the (day) of (month) , ar ) after reading the contents of this affidavit.
OA	TH COMMISSIONER

Price of Handbook Rs.300.00 With Postage Rs. 400.00 Price of Additional Form Rs. 50.00

Affix Passport Size photo

Last date of submission: 15 June 2011

# GOA UNIVERSITY Taleigao Plateau, Goa 403 206 2010-2011

# APPLICATION FORM FOR POSTGRADUATE PROGRAMME

Completed Application should be submitted to the Head of the concerned Department.

Registration No	o. (Undergrad	uate level)					
*APPLICATIO	ON NO.						
APPLICATIO	N FOR ADM	IISSION TO THI	E		(Part I)	COURSE	
1. (a) Name of (As appears in			um				
(b) Date of	f Birth						
(c) Father's	s Name						
(d) Mother	r's Name						
2. Local A							
	P.	in Code	Telepho	ne No			
	Е	-mail					· <b>···</b>
3. Perman (in deta	ent Address il)						
	Pi	n Code	Telepho	one No			••••
4. (a) Natio	nality	(b) C	ategory: SC	ST OB	C Gener	ral (kindl	y Tick)
5. Particulars	relating to De	gree Examination					
Examination	Month & Year	University	Main subjects	Aggregat e Marks	No. of attempts	Class obtaine d	

For Office	Use	Only
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is found to be false, m	y admission to the course	may be cancelled.	If admitted, I agree to	o abide by the Rules and
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• •	t(s) for which the candidat	•		. *
Subjects	Marks	Total	% Scored	Remarks
9. Marks obtained in sought:	the subject at the third ye	ar examination for	which admission for	postgraduate course is
which admission is sou	ts of 100 marks offered to			,
	00 marks offered at the th	•	, 11	
T NT CIT'S CA				
(With address)				

- 2. Attested copies of statement of marks (F.Y., S.Y. & T.Y. level exam.) should be attached to the application. Candidates seeking admission under reserved categories should enclose appropriate certificates, duly attested.
- 3. Attempts certificates from the Principal of the College last attended should be attached to the application.
- 4. Candidates from outside Universities should enclose certificate from the Principal of the College last attended, if the results of qualifying examinations are not declared.
- 5. Application with incorrect / partial information will not be considered.
- 6. Application received after the last date of submission of application form will not be considered.

FOR OFFICE USE ONLY	
Registration Fee	
Challan & date	
Registration Fee	

Affix Passport Size Photo

# GOA UNIVERSITY

Taleigao Plateau, Goa 403 206 2011-2012

Completed application should be submitted to the Head of the concerned Department

# APPLICATION FORM FOR REGISTRATION FOR THE Ph.D. DEGREE

Name of the Dept	
	apital letters: Shri/Smt/Kumlegree certificate)
(b) Date of Birth	
(c) Father's Name	
(d) Mother's Name	
2. Address (Local):	
	Pin Code Telephone No
1	E-mail
3. Address (Permanent)	
]	Pin Code Telephone No
4. Whether Employed: If yes, please give deta	Yes/No (Please tick) ails and enclose NOC from the Employer:
Name of the Employe	er:
Address of the Emplo	oyer:
Pin Code	Telephone No
Signature of the Head	l of Institution (With stamp):
5. Marital Status: Single If Married, Spouse'	
Name:	
Address:	
Pin Code	Telephone No

6. The Examination for the Bachelor's and Masters Degree passed by the applicant with the date of passing, the name of the University, optional subjects, if any and the class obtained.

Examination	Month & Year	University	Optional Subjects	Class
Bachelor's				
Master's				

7. The number and the date of the provisional or final eligib certificate should be attached to the application. (This applies to persons who are not graduate of this University of the provisional or final eligible certificate should be attached to the application.	
<ul><li>8. The title of the research topic:</li><li>9. The name of the Guide/Supervisor under whom the appli</li></ul>	
10. Date of Superannuation :	Signature of the Guide/Supervisor
11. Institutional affiliation of the Supervisor:	
12. Number of students working with the teacher for Ph.D.	
13. The name of the institution where the applicant propose	
14. Name of Co-guide (if any) Name of the Institution :	
15. Date of Superannuation :	
16. Challan No. and date of the payment of the tuition fee in	ncluding the University's share:
Signature of Co-guide (if any)	Signature of Candidate
Place & Date:	Signature of the Head of University Department
Note: Incomplete applications are likely to be rejected. Cost of Handbook Rs. 300/- with postage Rs. 400/-	