Parvatibai Chowgule College of Arts and Science (Autonomous)

1.1.1

Additional Information

Course Structure of Undergraduate Programmes

Parvatibai Chowgule College of Arts and Science (Autonomous)

Course Structure (B.A. and B.Sc.)
(Applicable to students who have registered for First Year B.A. and B.Sc. from Academic year 2019-20 onwards)

AO-3: Courses and Credits

1. **Courses without practical component:** A course without practical component will be of two or four credits. Each credit will be of 15 instruction hours. The course carrying two credits will have two instruction hours per week and a course carrying four credits will have four instruction hours per week.
2. **Courses with theory and practical components:** A theory-cum-practical course will be of four credits consisting of three credits for the theory component and one credit for the practical component. The theory component will have three instruction hours per week and the practical component will have a total of thirty instruction hours during the semester.
3. **Skill Courses:** A skill course will be of two or four credits. Each credit will be of 15 instruction hours. Twenty-five per cent of the skill course will consist of theory and seventy-five per cent of the course will consist of practice. (Theory should support practice; practice should not be confused with laboratory practical work. Practice requires repetitive performance of the work elements so to acquire dexterity or skill.)
4. Each credit of all courses will be evaluated for 25 marks.
5. Each credit of extra-curricular programme and internship will be of 30 hours.
6. The courses shall be offered to the students in the B.A. and the B.Sc. programmes as per the following Structure.

AO-3.1 Course Structure of the B.A. and B.Sc. Programmes

AO-3.1.1 Explanation

1. Core Courses are compulsory courses in a specific subject.
2. Elective Courses are subject-specific electives and generic electives.

   Subject-Specific Elective is an elective in specific subject offered by the student.

   Generic Elective is an elective course chosen generally from an unrelated discipline/subject. The interdisciplinary courses offered under the old course structure shall also be provided as generic elective courses under the current structure. P.S.: A course – a core or elective course - offered in a discipline/subject may be treated as a generic elective by a student of a different discipline/subject and vice versa.

3. Foundation Course:Foundation courses are Ability and Skill Enhancement Courses.

   Ability Enhancement Courses (Compulsory Foundation Courses consisting of 20 Credits) are courses in: (i) Language, (ii) Academic Writing, (iii) Research Writing, (iv)

Statistical Methods/ Elements of Basic Statistics and (v) Environmental Studies. Skill Enhancement Courses (Elective Foundation Courses consisting of 8 Credits) are value-based and/or skill-based courses and are aimed at providing hands-on-training, competencies, skills, etc. These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

Non-academic activities in a B.A./B.Sc. programme comprise of two categories: Extra-curricular Activities and Internship.

AO-3.1.2 Course Structure

STRUCTURE		CREDITS	SUBJECT SPECIFIC COURSES	Major(Core) + Project	Minor	Elective (Major/ Generic)
Component A (92 Credits)	CHOICE 1 : Single Major	32+4	8 Core Courses (Major) + Project Paper	8 + 1		
		48	12 Elective Courses (Major)			12
		8	2 Generic Elective Courses			2
	CHOICE 2 : Major - Minor	32+4	8 Core courses (Major) + Project Paper	8 + 1		
		24	6 Elective Courses (Major)			6
		24	6 Core Courses (Minor)		6	
		8	2 Generic Elective Courses			2
	CHOICE 3 : Double Major	32+4	8 Core Courses (Major-1) + Project Paper	8 + 1		
		32	8 Core Courses (Major-2)	8		
		16	2 Elective Courses (Major-1) + 2 Elective Courses(Major-2)			4
		8	2 Generic Elective Courses			2
STRUCTURE		CREDITS	FOUNDATION COURSES	Compulsory		Elective
Component B (28 Credits)	Foundation Courses	4	Language	1		
		4	Academic Writing (AW)	1		
		4	Research Writing (RW)	1		
		4	*Statistical Methods/ (SM) **Elements of Basic Statistics	1		
		4	Environmental Studies (EVS)	1		
		8=(4+4 or 4+2+2 or 2+2+2+2)	Skill Enhancement Courses (SEC) of 2 or 4 credits (Internal Option Offered)			2 to 4
Component C (6 Credits)	Extra-curricular	6 Or 3+3 Or	Music / Dance Programme	One Or A Combination of Programmes		
			Sports Programme			
			NCC Programme			

		2+4 Or 2+2+2	NSS Programme		
			Life-skills Programmes		
			Student Exchange Programme		
			Outreach Programme		
			Fine Art		
Component D	**Internship**	**4**	Internship (Minimum One Month / 120 Contact Hours)	1	
* Statistical Methods (For Economics, Geography, Psychology, Botany, Biotechnology, Chemistry, Computer Science, Geology, Mathematics, Physics and Zoology) ** Elements of Basic Statistics (For English, French, Hindi, Konkani, Marathi, History, Philosophy and Sociology)					

AO-3.2: Semester-wise Course Distribution of the B.A. Programme

Option I: Single Major

Semester	I	II	III	IV	V	VI
Component-A (Major) CC+CE	2CC	2CC	1CC	1CC	1CC	1CC
			3CE	3CE	3CE	3CE
					Project*	Project*
Component-A (Generic EC)	GEC	GEC				
Component-B	LANG	EVS	SEC*	SEC*		
	AW		SEC*	SEC*		
	SM/EBS*	SM/EBS*		RW		
Courses	5.5	4.5	5.0	6.0	4.5	4.5
Credits	22	18	20	24	18	18

(* 2 Credits Courses)

Option II: Major-Minor

Semester	I	II	III	IV	V	VI
Component-A (Major) CC+CE	2CC	2CC	1CC	1CC	1CC	1CC
			1CE	1CE	2CE	2CE
					Project*	Project*

Component-A (Minor)	1CC	1CC	1CC	1CC	1CC	1CC
Component-A (Generic EC)			GEC	GEC		
Component-B	LANG	EVS	SEC*	SEC*		
	AW		SEC*	SEC*		
	SM/EBS*	SM/EBS*		RW		
Courses	5.5	4.5	5.0	6.0	4.5	4.5
Credits	22	18	20	24	18	18

(* 2 Credits Courses)

Option III: Double Major

Semester	I	II	III	IV	V	VI
Component-A (Major-1)	2CC	2CC	1CC	1CC	1CC	1CC
					1CE	1CE
					Project*	Project*
Component-A (Major-2)	2CC	2CC	1CC	1CC	1CC	1CC
					1CE	1CE
Component-A (Generic EC)			GEC	GEC		
Component-B	LANG		AW	RW		
	SM/EBS*	EVS	SEC*	SEC*		
		SM/EBS*	SEC*	SEC*		
Courses	5.5	5.5	5.0	5.0	4.5	4.5
Credits	22	22	20	20	18	18

(* 2 Credits Courses)

AO-3.3: Semester-wise Course Distribution of the B.Sc. Programme

Option I: Single Major

Semester	I	II	III	IV	V	VI
Component-A (Major) CC+CE	2CC	2CC	1CC	1CC	1CC	1CC
			3CE	3CE	3CE	3CE
					Project*	Project*
Component-A (Generic EC)	GEC	GEC				
Component-B	EVS	LANG	SEC*	SEC*		
		AW	SEC*	SEC*		
	SM*	SM*	RW			
Courses	4.5	5.5	6.0	5.0	4.5	4.5
Credits	18	22	24	20	18	18

(* 2 Credits Courses)

Option II: Major-Minor

Semester	I	II	III	IV	V	VI
Component-A (Major) CC+CE	2CC	2CC	1CC	1CC	1CC	1CC
			1CE	1CE	2CE	2CE
					Project*	Project*
Component-A (Minor)	1CC	1CC	1CC	1CC	1CC	1CC
Component-A (Generic EC)			GEC	GEC		
Component-B		AW	SEC*	SEC*		
	EVS	LANG	SEC*	SEC*		
	SM*	SM*	RW			
Courses	4.5	5.5	6.0	5.0	4.5	4.5
Credits	18	22	24	20	18	18

(* 2 Credits Courses)

Option III: Double Major

Semester	I	II	III	IV	V	VI
Component-A (Major-1)	2CC	2CC	1CC	1CC	1CC	1CC
					1CE	1CE
					Project*	Project*
Component-A (Major-2)	2CC	2CC	1CC	1CC	1CC	1CC
					1CE	1CE
Component-A (Generic EC)			GEC	GEC		
Component-B	EVS	LANG	AW	RW		
	SM*	SM*	SEC*	SEC*		
			SEC*	SEC*		
Courses	5.5	5.5	5.0	5.0	4.5	4.5
Credits	22	22	20	20	18	18

(* 2 Credits Courses)

Parvatibai Chowgule College of Arts and Science (Autonomous)

1.1.1

Additional Information

Course Structure of B.Voc – Software Development

DETAILS OF BACHELOR OF VOCATION - SOFTWARE DEVELOPMENT

The College shall adopt the ordinance OA-23 of Goa University with certain amendments. The Bachelor of Vocation (B.Voc.) shall be governed under AO-6 of our College.

AO-6.1. Introduction

It has been a long- felt necessity to align higher education with the emerging needs of the economy so as to ensure that the graduates of Higher Education system have adequate knowledge and skills for employment and entrepreneurship. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner while developing a holistic and well-groomed graduate.

The University Grants Commission (UGC) has launched a scheme on Skill Development based higher education as part of college/university education, leading to Bachelor of Vocation (B.Voc.) Degree with multiple exits such as Diploma/Advanced Diploma under the National Skills Qualifications Framework (NSQF).The B.Voc. programme is focused o n universities and colleges providing undergraduate studies, which would also incorporate specific job roles along with broad based general education. This would enable the graduates completing B.Voc. to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge**.**

The proposed vocational programme will be a judicious mix of skills, professional education and also appropriate content of general education. It is designed with the objective of equipping the students to cope with the emerging trends and challenges in the Industry.

AO-6.2. Objectives

- To provide judicious mix of skills relating to a profession and appropriate content of General Education.
- To ensure that the students have adequate knowledge and skills, so that they are ready to work at each exit point of the programme.
- To provide flexibility to the students by means of pre -defined entry and multiple exit points.
- To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
- To provide vertical mobility to students coming out of 10+2 with vocational subjects.

AO-6.3. Nomenclature of the Course

The nomenclature of the course shall be Diploma/Advanced Diploma/B.Voc Degree in Programmes (as decided from time to time) depending on the Exit level of the course. This is also indicated in section AO-6.4. The Programmes shall be in keeping with NSQF.

AO-6.4. Duration and NSQF level of the Programme

The duration of the Programme shall be as given in the table below.

Nomenclature	**Duration**	**NSQF Level**
Diploma	Two Semesters	Level 5
Advanced Diploma	Four Semesters	Level 6
B. Voc Degree	Six Semesters	Level 7

AO-6.5. Eligibility

AO-6.5.1 Eligibility for admission to Semester-I

Any candidate who has passed the HSSC or its equivalent, in any stream from Goa Board of Secondary and Higher Secondary Education or equivalent is eligible for admission to the First Semester.

AO-6.5.2: Eligibility for admission to Semester-II, III, IV, V and VI

(a) A student will be eligible to be admitted to each of the semester on completion of the previous semester.

(b) A student will be allowed to undertake a Skill course (SK) having a prerequisite only if he/she has attained at least the grade P in the specified prerequisite course/s.

AO-6.7. Programme Structure

The B.Voc. Programme shall comprise credits for Skill-based Courses and General Education as per the following table:

Nomenclature	Duration	Skill-based Credits	General Education Credits	Total Credits
Diploma	Two Semesters	36	24	60
Advanced Diploma	Four Semesters	72	48	120
B.Voc. Degree	Six Semesters	108	72	180

One Credit shall be equivalent to 15 hours for theory, workshops/labs and tutorials, 30 hours for internship/field work and self-learning, based on e-content or such other.

Note : Laptop is compulsory for FY B.Voc Software Development

Semester	General Education Component			Skill Component		
		T	P		T	P
I	Language Paper I: CSD-GE1	4	0	Computer Organization and Operating System CSD-SK1	3	3
	Elements of Basic Statistics CSD-GE2	2	0	Web Design CSD-SK2	3	3
	Cyber Security CSD-GE3	4	0	Introduction to Programming CSD-SK3	3	3
II	Office Automation Tools CSD-GE4	4	0	Database Management Systems CSD-SK4	3	3
	Mathematical foundation of Computer Science CSD-GE5	4	0	Content Management System CSD-SK5	3	3
	Academic Writing CSD-GE6	4	0	Multimedia CSD-SK6	3	3
	Elements of Basic Statistics II CSD-GE7	2	0			
III	Environmental Studies-I CSD-GE8	2	0	Object Oriented Programming CSD-SK7	3	3
	Business Communication CSD-GE9	4	0	Computer Networks CSD-SK8	3	3
	Accounting for Non-accountants CSD-GE10	4	0	Server Side Programming CSD-SK9	3	3
	Internship	2				
IV	Entrepreneurship CSD-GE11	4	0	Web Development Framework CSD-SK10	3	3
	Environmental Studies-II CSD-GE12	2	0	Software Engineering CSD-SK11	3	3
	Personality Enhancement CSD-GE13	4	0	Mobile Application Development CSD-SK12	3	3
	Internship	2				
V	Digital Marketing CSD-GE14	4	0	Data Structures CSD-SK13	3	3
	Organization Behavior CSD-GE15	4	0	Software Testing CSD-SK14	3	3
	Math for Competitive Exams CSD-GE16	4		Project Work	6	
VI	E-commerce CSD-GE17	4	0	Network Security CSD-SK15	3	3
	Independent Studies CSD-GE18	4	0	Cloud Computing CSD-SK16	3	3
	Human Computer Interactions CSD-GE19	4	0	Project	6	

Parvatibai Chowgule College of Arts and Science (Autonomous)

1.1.1

Additional Information

Course Structure of Postgraduate Degree and Diploma Programmes

INDEX TABLE

Chowgule College and Postgraduate Programmes

Parvatibai Chowgule College of Arts and Science, Margao–Goa, founded in 1962, is an Autonomous institution of higher education within the Goa University system since 2014. This premier educational institution has been accredited by the National Assessment and Accreditation Council (NAAC) at Grade A with a cumulative grade point average of 3.41 on a 4 Point Scale, the highest for any college in the State of Goa.

Since becoming autonomous the College introduced the Choice Based Credit System (CBCS) in all its undergraduate and postgraduate educational programmes. Besides the CBCS, the revision of the programmes was done by taking into account the employability issues. The College is presently involved in strengthening its outcome-based education and evolving it further so as to meet the needs of the present-day generation.

The College is directed by its mission and vision to seek higher distinctions and impart quality education with innovative curriculum, appropriate teaching-learning-evaluation methodologies, twenty-first century technologies and better infrastructure.

Under the choice-based credit system the College offers core courses and elective courses in each of its educational programmes both at the undergraduate and postgraduate levels. Its postgraduate programmes are governed by Autonomy Ordinances (AO), – AO-5 for master's degree programmes, and AO-9 for postgraduate diploma programmes.

The postgraduate degree programmes offered by the College on self-financed basis are:

1. Master of Arts in Applied Economics
2. Master of Arts in Child Psychology and Child Development
3. Master of Arts in Geography
4. Master of Arts in English
5. Master of Arts in Hindi
6. Master of Science in Analytical Chemistry
7. Master of Science in Geoinformatics
8. Master of Science in Information Technology

The postgraduate diploma programmes offered on self-financed basis are:

1. Postgraduate Diploma in Clinical Genetics and Medical Laboratory Techniques
2. Postgraduate Diploma in Geoinformatics

The following postgraduate diploma programme offered is Government aided

3. Postgraduate Diploma in Computer Applications

The postgraduate degree programmes are two-years-four-semesters full time programmes carrying a minimum of 80 credits and the postgraduate diploma programmes are one-year-two-semesters full time programmes carrying a minimum of 40 credits. The courses are conducted using a range of teaching-learning-evaluation methodologies evolved conceptually and through the use of ICT processes. For instance the outcome-based-education followed by many teaching departments is a conceptually evolved methodology, whereas the flipped classroom has evolved as a result of the use of ICT and LRMS. The aim of excellence has been a driving force for innovative developments in learning programmes at the College.

A student's learning is evaluated in the courses through continuous assessments using various evaluation methodologies and through a comprehensive semester-end examination. The evaluation is done not only to determine a student's grasp of the subject-knowledge in the course but also to determine the extent of other skills acquired such as critical-thinking, analysing, out-of-the-box thinking, oral and written communication, referencing, etc. The performances of a student in the various courses are graded and a CGPA (Cumulative Grade-Point Average) is calculated so as to ascertain the student's overall performance in the programme.

This prospectus provides information, in a nutshell, on these above-listed programmes for the benefit of students who are deciding about taking admission to any of these programmes.

How to apply for admission:
To apply for admission, please visit our college website
http://www.chowgules.ac.in/admission/
Complete the online admission form as per instructions provided therein.

Postgraduate Degree Programmes

Master of Arts in Applied Economics

(M.A. in Applied Economics)

(Self-Financed)

Programme Code: PGM-ECO

Duration: Two Years (Four Semesters)

Aim of the Programme:

The M.A. Programme in Applied Economics aims to provide a applied orientation to economics and develop expertise in key areas of concentration as banking and finance, travel and tourism, human resources development and management, foreign trade, finance and marketing, environmental economics and management, and strengthen the skills in problem recognition, problem-solving, analytical, communication and out-of-the-box thinking. The teaching-learning methodologies used include interactive lectures-cum-discussions, flipped classrooms, workshops, seminars, research-paper reviews, case studies, experiential learning through internship and field surveys, problem-based learning, research assignments and dissertations.

On completing the programme the students can look for careers in banking and finance, travel and tourism, human resources development and management, foreign trade, finance and marketing, environmental economics and management, teaching and research, and host of activities connected with strategic thinking and decision-making.

Eligibility and Selection Procedures:

Graduates with Economics Major (B.A./B.Com.) and good grades/performance in the qualifying examination are eligible to apply for M.A. in Applied Economics. The selection will be based on merit and performance in the entrance aptitude test (delivered online by the counsellor). Proficiency in the English language is a basic requirement for the programme. Potential candidates without Economics Major in the qualifying examination will be considered for selection on basis of merit/performance in the qualifying examination AND on clearing the Subject Change Test.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University Reg. Fee*	Tuition Fee	Library Fee	Gymkhana. Fee	Student Activity Fee	Students' Aid Fund Contribution	Comp. Lab Fee	Student service charges	TOTAL FEES‡
630.00	47865.00	1500.00	420.00	420.00	120.00	0.00	10000.00	60955.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University Reg. Fee	Tuition Fee	Library Fee	Gymkhana. Fee	Student Activity Fee	Students' Aid Fund Contribution	Comp. Lab Fee	Student Service Charges	TOTAL FEES‡
0.00	41162.00	1500.00	420.00	420.00	120.00	0.00	10000.00	53622.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 100

Course Groups	Nature of Courses	General Code	Credits Required
I	Core Courses	PGM-ECO.I	40
II	Allied Skill Elective Courses	PGM-ECO.II	8
III	Elective Applied Concentrations (Two)	PGM-ECO.III	32
IV	Internship (Compulsory)*	PGM-ECO.IV	20
	Total Credits required for completing the programme: M.A. in Applied Economics		100

Course Structure of M.A. in Applied Economics

PGM-ECO	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core Courses Credits – 12	Core Courses Credits – 12
	Applied Elective Concentration Credits – 08	Applied Elective Concentration Credits – 08
	Pre-Internship Work Credits – 06	Pre-Internship Work Credits – 06
	Total First Semester Credits = 26	**Total Second Semester Credits = 26**
Part Two	**Third Semester**	**Fourth Semester**
	Core Courses Credits – 08	Core Courses Credits – 08
	Allied Skill Elective Course Credits – 04	Allied Skill Elective Course Credits – 04
	Applied Elective Concentration Credits – 08	Applied Elective Concentration Credits – 08
	Internship Work Credits – 06	Post-Internship Report Credits – 02
	Total Third Semester Credits = 26	**Total Fourth Semester Credits = 22**

*Internship Work – PGM-ECO-IV-IC2 (involving 180 hours of onsite/industry work) is to be undertaken during the summer or/and winter vacations.

Course Information (a)

Sr. No.	Course Groups and Course Titles	Course Code	Course Credits
	I. Core Courses (PGM-ECO-I)		
1	Microeconomics I	PGM-ECO-I-C1	4
2	Microeconomics II	PGM-ECO-I-C2	4
3	Macroeconomics I	PGM-ECO-I-C3	4
4	Macroeconomics II	PGM-ECO-I-C4	4
5	Statistics for Economics	PGM-ECO-I-C5	4
6	Mathematical Economics	PGM-ECO-I-C6	4
7	Public Economics	PGM-ECO-I-C7	4
8	Development Economics	PGM-ECO-I-C8	4
9	Fundamentals of Econometrics	PGM-ECO-I-C9	4
10	Research Methods in Economics	PGM-ECO-I-C10	4
	II. Allied Skill Elective Courses (PGM-ECO-II)		
1	Risk Analysis and Management	PGM-ECO-II-E1	4
2	Accounting for Decision-Making	PGM-ECO-II-E2	4
3	Linear Programming and Optimization	PGM-ECO-II-E3	4
4	Dissertation (Sem. 3 and Sem. 4)	PGM-ECO-II-E4	8
	III. Applied Elective Concentrations (PGM-ECO-III) (Two Full Concentrations have to be Elected from Five Below)		
1	Banking and Finance Concentration: (Four Courses of Four Credits each)	(PGM-ECO-III-E1)	16
2	Travel and Tourism Concentration: (Four Courses of Four Credits each)	(PGM-ECO-III-E2)	16
3	Demography and Human Resources Concentration: (Four Courses of Four Credits each)	(PGM-ECO-III-E3)	16
4	Globalization and International Business Concentration: (Four Courses of Four Credits each)	(PGM-ECO-III-E4)	16
5	Environment and Sustainability Concentration: (Four Courses of Four Credits each)	(PGM-ECO-III-E5)	16
	IV. Internship (PGM-ECO-IV)		
1	Pre-Internship Work (Sem. 1 and Sem. 2)	PGM-ECO-IV-IC1	12
2	Internship Work	PGM-ECO-IV-IC2	6
3	Post-Internship Work	PGM-ECO-IV-IC3	2

Course Information (b)

Courses Group III: Applied Elective Concentrations			
Sr. No.	**Course Titles**	**Course Code**	**Course Credits**
	1. Banking and Finance Concentration (PGM-ECO-III-E1)		
1	Financial Economics	PGM-ECO-III-E1.1	4
2	Economics of Banking: Theory, Policy, Practices	PGM-ECO-III-E1.2	4
3	Financial Derivatives	PGM-ECO-III-E1.3	4
4	Financial Projects Appraisal	PGM-ECO-III-E1.4	4
	2. Travel and Tourism Concentration (PGM-ECO-III-E2)		
5	Tourism Economics: Concepts and Practices	PGM-ECO-III-E2.1	4
6	Managerial Economics for Tourism	PGM-ECO-III-E2.2	4
7	Travel and Tourism Infrastructure	PGM-ECO-III-E2.3	4
8	Tourism in Goa	PGM-ECO-III-E2.4	4
	3. Demography and Human Resources Concentration (PGM-ECO-III-E3)		
9	Demography: Concepts, Techniques, Applications	PGM-ECO-III-E3.1	4
10	Health Economics	PGM-ECO-III-E3.2	4
11	Strategic Human Resources Management	PGM-ECO-III-E3.3	4
12	Industrial Relations and Labour Welfare	PGM-ECO-III-E3.4	4
	4. Globalization and International Business Concentration (PGM-ECO-III-E4)		
13	International Trade and Globalization	PGM-ECO-III-E4.1	4
14	International Finance	PGM-ECO-III-E4.2	4
15	Global Marketing	PGM-ECO-III-E4.3	4
16	International Trade Practices, Documentation and Procedures	PGM-ECO-III-E4.4	4
	5. Environment and Sustainability Concentration (PGM-ECO-III-E5)		
17	Environmental Economics	PGM-ECO-III-E5.1	4
18	Environment and Sustainable Development Strategies	PGM-ECO-III-E5.2	4
19	Environmental Issues and Solutions	PGM-ECO-III-E5.3	4
20	Environmental Policy and Governance	PGM-ECO-III-E5.4	4

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Master of Arts in Child Psychology and Child Development

(M.A. in Child Psychology and Child Development)

(Self-Financed)

Programme Code: PGM-PSY

Duration: Two Years (Four Semesters)

Aim of the Programme:

The M.A. Programme in Psychology of the Department of Psychology of Parvatibai Chowgule College of Arts and Science (Autonomous) is driven by its core objective to equip the students with in-depth knowledge and expertise in Child Psychology and Child Development. The syllabus has been specially designed to bridge the gap between education and industry. With major emphasis on skill-based courses, the M.A. Programme intends to equip students with the knowledge and skills required to deal with any issues pertaining to children. This course emphasizes on experiential learning with focus on research, case study method and internship. To gain skills and practical knowledge, the student will be exposed to various field trips, institutions working with child development and will have experiential learning through various case studies.

On successful completion of the course, students will be eligible to work as psychologists, psychotherapists and counsellors in schools, counselling centres & child development centres. Students can also join in the field of academics and research related to child psychology & child development.

Eligibility and Selection Procedure:

Admission to the two year, four semesters, full time programme leading to the degree of Master of Arts in Psychology is based on merit. It is open to any candidate passing the Bachelor's Degree Examination in Psychology with a minimum score of 50%. Students from other disciplines can seek admission provided there are seats available and will be required to clear the entrance examination. Proficiency in the English language is a basic requirement for the programme.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University Reg. Fee*	Tuition Fee	Library Fee	Gymkhana. Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
630.00	50000.00	1500.00	420.00	420.00	120.00	1500.00	10000.00	64590.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University. Reg. Fee	Tuition Fee	Library Fee	Gymkhana. Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
0.00	50000.00	1500.00	420.00	420.00	120.00	1500.00	10000.00	63960.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core - Theory	12
2	Core - Skill based	28
3	Elective	40
	TOTAL	80

Course Structure – M.A. in Child Psychology and Child Guidance

PGM-PSY	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core (Theory) Course Credits – 03	Core (Theory) Course Credits – 03
	Core (Skill-based) Course Credits – 07	Core (Skill-based) Course Credits – 07
	Elective Course Credits – 08	Elective Course Credits – 08
	Total First Semester Credits =18	**Total Second Semester Credits = 18**
Part Two	**Third Semester**	**Fourth Semester**
	Core (Theory) Course Credits – 03	Core (Theory) Course Credits – 03
	Core (Skill-based) Course Credits – 07	Core (Skill-based) Course Credits – 07
	Elective Course Credits – 16	Elective Course Credits – 08
	Total Third Semester Credits = 26	**Total Fourth Semester Credits = 18**

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester I		
1	Child Development (Theory)	PGM-PSY-C1	3
2	Practicum (Skill Based)	PGM-PSY-S-C2	4
3	Case studies in Child Development (Skill Based)	PGM-PSY-S-C3	3

Course Information (a) Continued

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester II		
4	Child Psychopathology (Theory)	PGM-PSY-C4	3
5	Counselling Therapies for Children I (Skill Based)	PGM-PSY-S-C5	4
6	Case Studies in Child Psychopathology (Skill Based)	PGM-PSY-S-C6	3
	Semester III		
7	Counselling Approaches	PGM-PSY-C7	3
8	Counselling Therapies for Children II (Skill Based)	PGM-PSY-S-C8	4
9	Case Studies Ways to Understand Psychotherapies (Skill Based)	PGM-PSY-S-C9	3
	Semester IV		
10	Children with Disabilities and Understanding Special Needs (Theory)	PGM-PSY-C10	3
11	Management of Learning Disabilities (Skill Based)	PGM-PSY-S-C11	4
12	Case Studies in Childhood Disabilities and Understanding Special Needs (Skill Based)	PGM-PSY-S-C12	3

Course Information (b)

Sr. No.	Course Titles	Course Code	Course Credits
	ELECTIVE COURSES		
1	Research Methodology in Psychology	PGM-PSY-E1	4
2	School Counselling	PGM-PSY-E2	4
3	Positive Psychology	PGM-PSY-E3	4
4	Advanced Statistics in Psychology	PGM-PSY-E4	4
5	Psychology of Adolescence	PGM-PSY-E5	4
6	NGO Management	PGM-PSY-E6	4
7	Paediatric Psychology	PGM-PSY-E7	4
8	Child & Crime	PGM-PSY-E8	4
9	Dissertation (Sem. 3 and Sem. 4)	PGM-PSY-D-E9	8
10	Rehabilitation Psychology	PGM-PSY-E10	4
11	Counselling Parents	PGM-PSY-E-11	4
12	Internship	PGM-PSY-E-12	8

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Master of Arts in Geography

(M.A. in Geography)

(Self-Financed)

Programme Code: PGM-GEG

Duration: Two Years (Four Semesters)

Aim of the Programme:

The aim of the M.A. programme in Geography is to develop confident geographers through various activities and initiatives of the department enabling them to acquire skills and knowledge in order to improve their employability skills.

Eligibility and Selection Procedure:

A student with a minimum score of 50% (CGPA of 5.3 and above in case of CBCS) at B.A/B.Sc. Examination (preferably with Geography) from a recognized University/Institute is eligible. Students with courses other than Geography may also apply; however, their selection will be based on their performance in the Aptitude Test in Geography, conducted by the department.

Total Number of Seats (including reserved seats): 25

Total Fees (₹) for Part I (Semesters 1 and 2):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Project Fee	Student Service Charges	TOTAL FEES‡
630.00	35200.00	1500.00	420.00	420.00	130.00	1000.00	0.00	10000.00	49300.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University. Reg. Fee	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Project Fee	Student Service Charges	TOTAL FEES‡
0.00	33000.00	1500.00	420.00	400.00	120.00	1000.00	2000.00	10000.00	48440.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	40
2	Elective Courses	40
	Total Credits Required	80

Course Structure of M.A. in Geography

PGM-GEG	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core Course Credits – 10	Core Course Credits – 10
	Elective Courses Credits – 10	Elective Courses Credits – 10
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**
Part Two	**Third Semester**	**Fourth Semester**
	Core Course Credits – 10	Core Course Credits – 10
	Elective Courses Credits – 10	Elective Courses Credits – 10
	Total Third Semester Credits = 20	**Total Fourth Semester Credits = 20**

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester I		
1	Advanced Geomorphology	PGM-GEG-C1	4
2	Advanced Climatology	PGM-GEG-C2	4
3	Practicals in Geomorphology & Climatology	PGM-GEG-C3	2
	Semester II		
4	Geography of Population	PGM-GEG-C4	2
5	Advanced Economic Geography	PGM-GEG-C5	2
6	Practicals in Economic & Population Geography	PGM-GEG-C6	2
7	Basics of Geographical Thought	PGM-GEG-C7	2
8	Basics of Research Methodology	PGM-GEG-C8	2
	Semester III		
9	Statistical Techniques	PGM-GEG-C9	4
10	Fundamentals of Remote Sensing	PGM-GEG-C10	2
11	Practicals in Remote Sensing	PGM-GEG-C11	2
12	Computer Cartography	PGM-GEG-C12	2

Course Information (a) Continued

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester IV		
13	Regional planning and development	PGM-GEG-C13	4
14	Fundamentals of GIS	PGM-GEG-C14	2
15	Practicals in GIS	PGM-GEG-C15	2
16	Field Techniques	PGM-GEG-C16	2

Course Information (b)

Sr. No.	Core Titles	Course Code	Course Credits
	ELECTIVE COURSES		
1	Introduction to Tourism	PGM-GEG-E1	2
2	Rural Studies	PGM-GEG-E2	2
3	Geography of Environment	PGM-GEG-E3	4
4	Advanced Regional Geography	PGM-GEG-E4	2
5	Advanced Regional Geography of India	PGM-GEG-E5	2
6	Urban Development and Processes	PGM-GEG-E6	2
7	Islands of the Indian Ocean	PGM-GEG-E7	2
8	Techniques of Academic Report Writing	PGM-GEG-E8	2
9	Geography and Tourism	PGM-GEG-E9	2
10	Teaching Techniques in Geography	PGM-GEG-E10	4
11	Watershed Management	PGM-GEG-E11	2
12	Fluvial Geomorphology	PGM-GEG-E12	2
13	Geography and Development Models	PGM-GEG-E13	2
14	Dissertation (Sem. 3 and Sem. 4)	PGM-GEG-E14	8
15	Geography of Migration	PGM-GEG-E15	4
16	Coastal Geomorphology	PGM-GEG-E16	2
17	Digital Image Processing	PGM-GEG-E17	2
18	Tourism Planning and Development	PGM-GEG-E18	2

For additional information contact:
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Master of Arts in English

(M.A. in English)

(Self-Financed)

Programme Code: PGM-ENG

Duration: Two Years (Four Semesters)

Aim of the Programme:

The MA program in English emphasizes on literature courses, skill-based courses, and contemporary literary courses and is specially designed to bridge the gap between education and industry. The programme focuses on experiential learning with emphasis on research, teaching, creative writing and Writing for the media. The two years course is a mix of core and elective papers with a blend of theory and skill based courses. A bridge course has also being designed to integrate new students into our system.

To attain this objective the department uses several innovative teaching-learning methods like interactive methods of teaching English language and literature, screening of films based on English novels and plays, use of audio-visuals in teaching. The students will also have exposure to experiential learning through internship and dissertation. At the same time, the Department pays equal attention to the co-curricular and extracurricular activities.

Eligibility and Selection Procedure:

Students who have completed their BA with English (Six Units/Single Major) or English (Three units/ Double Major/Major in Major/Minor), well-versed in English language, have a passion for language and literature, are technologically savvy and who are inclined towards creativity are eligible to enrol in the programme. Any student who has a strong desire to study English Literature and its allied courses may seek admission with the following eligibility conditions: (a) Graduate with minimum score of 60% preferably with English, and (b) Any student from other discipline may seek admission provided there are seats available through a test conducted by the department.

Total Number of Seats (including reserved seats): 25

Total Fees (₹) for Part I (Semesters 1 and 2):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Project Fee	Student Service Charges	TOTAL FEES‡
630.00	50000.00	1500.00	420.00	420.00	120.00	0.00	10000.00	63090.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University. Reg. Fee	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Project Fee	Student Service Charges	TOTAL FEES‡
0.00	50000.00	1500.00	420.00	420.00	120.00	500.00	10000.00	62960.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	40
2	Elective Courses	40
3	Bridge Courses (Optional)	4*
	Total Credits Required	80
*4 Credits obtained from Bridge Courses are not considered for determining the CGPA.		

Course Structure – M.A. in English

PGM-ENG	**Odd Semester**	**Even Semester**
Part One	**First Semester**	**Second Semester**
	Core Courses Credits – 12	Core Courses Credits – 12
	Elective Courses Credits – 08	Elective Courses Credits – 08
	Bridge Course Credits – 02	Bridge Course Credits – 02
	Total First Semester Credits = 20+02	**Total Second Semester Credits = 20+02**

Part Two	**Third Semester**	**Fourth Semester**
	Core Courses Credits – 08	Core Courses Credits – 08
	Elective Courses Credits – 12	Elective Courses Credits – 12
	Total Third Semester Credits = 20	**Total Fourth Semester Credits = 20**

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
Semester I			
	CORE COURSES		
1	English Poetry	PGM-ENG-C1	4
2	Twentieth Century English Drama	PGM-ENG-C2	4
3	Exploring Narratives in Fiction	PGM-ENG-C3	4
	BRIDGE COURSE (Optional)		
3	Engaging Literature (Bridge Course)	PGM-ENG-B1	2
	ELECTIVE COURSES (Any 2 from the list)		
4	Technical and Media Writing	PGM-ENG-E1	4
5	Green Studies	PGM-ENG-E2	4
6	Visual Literature - Perspectives	PGM-ENG-E3	4
7	Creative Writing	PGM-ENG-E4	4
8	Mythology, Archetype & Literature	PGM-ENG-E5	4
9	Indian Literature in Translation	PGM-ENG-E6	4
10	Shakespeare	PGM-ENG-E7	4
Semester II			
	CORE COURSES		
11	Linguistics	PGM-ENG-C4	4
12	Literary Theory	PGM-ENG-C5	4
13	The Indian Subaltern: Dalit and Transgender Narratives	PGM-ENG-C6	4
	BRIDGE COURSE (Optional)		
14	Research Methodology	PGM-ENG-B2	2
	ELECTIVE COURSES (Any 2 from the list)		
15	Popular Literature (Genre)	PGM-ENG-E8	4
16	ELLT (English Language and Literature Teaching)	PGM-ENG-E9	4
17	Film Studies	PGM-ENG-E10	4
18	Prose Writings	PGM-ENG-E11	4
19	Women's Literature	PGM-ENG-E12	4
20	Children's Literature	PGM-ENG-E13	4
21	World Subaltern: Aboriginal Narratives	PGM-ENG-E14	4
22	A Reflection of Gender & Sexuality	PGM-ENG-E15	4

Course Information (b)

Sr. No.	Course Title	Course Code	Course Credits
Semester III			
	CORE COURSES		
1	Post-Colonial: Theory And Practice	PGM-ENG-C7	4
2	Asian Literature	PGM-ENG-C8	4
	ELECTIVE COURSES		
3	Technical and Media Writing	PGM-ENG-E1	4
4	Green Studies	PGM-ENG-E2	4
5	Visual Literature - Perspectives	PGM-ENG-E3	4
6	Creative Writing	PGM-ENG-E4	4
7	Mythology, Archetype & Literature	PGM-ENG-E5	4
8	Indian Literature in Translation	PGM-ENG-E6	4
9	Shakespeare	PGM-ENG-E7	4
10	Dissertation* (Sem. 3 and Sem. 4, Total credits = 08)	PGM-ENG-E16	4
Semester IV			
	CORE COURSES		
11	Modern European Literature	PGM-ENG-C9	4
12	World Literature	PGM-ENG-C10	4
	ELECTIVE COURSES		
13	Popular Literature (Genre)	PGM-ENG-E8	4
14	ELLT	PGM-ENG-E9	4
15	Film Studies	PGM-ENG-E10	4
16	Prose Writings	PGM-ENG-E11	4
17	Women's Literature	PGM-ENG-E12	4
18	Children's Literature	PGM-ENG-E13	4
19	World Subaltern: Aboriginal Narratives	PGM-ENG-E14	4
20	A Reflection of Gender & Sexuality	PGM-ENG-E15	4
21	Dissertation* (Sem. 3 and Sem. 4, Total credits = 08)	PGM-ENG-E16	4
*If Dissertation is an elective in Sem. 3, it has to be continued in Sem. 4. The dissertation is evaluated for 200 marks in its entirety towards the end of Semester 4. The total of 08 credits are earned on satisfactory completion of the dissertation.			

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Master of Arts in Hindi

(M.A. in Hindi)

(Self-Financed)

Programme Code: PGM-HIN

Duration: Two Years (Four Semesters)

Aim of the Programme:

The M.A. programme in Hindi focuses on development of various skills like aesthetic, creative writing, linguistic as well as literary. It enhances employability skills of the students. The programme also includes courses which guide the students towards improving research writing skills. The students receive wholesome education which moulds them into wholesome personalities. Thereby enabling them to outshine in society at various levels like, linguistic, literary as well as social.

In addition to teaching, after doing M.A. in Hindi, students can also pursue their career in the fields of media, official language, translation, writing etc.

Eligibility and Selection Procedure:

A candidate seeking admission to the two year, four semesters, full-time programme must be a graduate in Arts with Hindi Major and must have scred at least 50% aggregate marks from a recognized university. The admission will be based on merit.
Candidates from other streams or those who do not have a Hindi Major will have to answer and clear an entrance exam to get admission.

The student should have knowledge of reading and writing in Hindi language. Students are expected to have interest in Hindi language and literature and are committed to doing something new in the field.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Comp. Lab. Fee	Project Fee	Student Service Charges	TOTAL FEES‡
630.00	32500.00	1500.00	420.00	420.00	120.00	0.00	0.00	10000.00	45590.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.
‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University Reg. Fee	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Comp. Lab. Fee	Project Fee	Student Service Charges	TOTAL FEES‡
0.00	32500.00	1500.00	420.00	420.00	58.00	0.00	500.00	10000.00	45398.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	40
2	Elective Courses	40
	Total Credits	80

Course Structure – M.A. in Hindi

PGM-HIN	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core Course Credits – 12	Core Course Credits – 12
	Elective Courses Credits – 08	Elective Courses Credits – 08
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**
Part Two	**Third Semester**	**Fourth Semester**
	Core Course Credits – 08	Core Course Credits – 08
	Elective Courses Credits – 12	Elective Courses Credits – 12
	Total Third Semester Credits = 20	**Total Fourth Semester Credits = 20**

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
1	Hindi Sahitya Ka Itihas (Aadikal, Bhaktikal Evam Ritikal)	PGM-HIN-C1	4
2	Prachin Evam Madhyakalin Kavya	PGM-HIN-C2	4
3	Bhashavigyan	PGM-HIN-C3	4
4	Hindi Sahitya Ka Itihas: Adhunik Kal	PGM-HIN-C4	4
5	Adhunik Kavya	PGM-HIN-C5	4
6	Vishesh Vidha: Upanyas	PGM-HIN-C6	4
7	Bharatiya Kavyashastra	PGM-HIN-C7	4
8	Prayojanmulak Hindi	PGM-HIN-C8	4
9	Pashehatya Kavyashastra	PGM-HIN-C9	4
10	Media Lekhan	PGM-HIN-C10	4

Course Information (b)

Sr. No.	Course Titles	Course Code	Course Credits
	ELECTIVE COURSES		
1	Rachanakar: Sarchidanand Hiranand Vatsayan 'Agyey'	PGM-HIN-E1	4
2	Dalit Vimarsh	PGM-HIN-E2	4
3	Anuvad	PGM-HIN-E3	4
4	Vishesh Vidha: Kahani	PGM-HIN-E4	4
5	Aalochak Aur Aalochana	PGM-HIN-E5	4
6	Patrakarita Evam Jansanchar Madhyam	PGM-HIN-E6	4
7	Bharatiya Sahitya	PGM-HIN-E7	4
8	Natak Evam Rangmanch	PGM-HIN-E8	4
9	Aadhunik Hindi Sahitya Ki Vaicharik Prushtbhumi	PGM-HIN-E9	4
13	Hindi Bhasha, Lipi, Vyakran Evam Sarvekshan	PGM-HIN-E10	4
10	Adhunik Gadya (Natak, Upanyas, Nibandh, Kahani)	PGM-HIN-E11	4
11	Stree Vimarsha	PGM-HIN-E12	4
12	Gadhya Ki Anya Vidhaye	PGM-HIN-E13	4
14	Shodh Pravidhi	PGM-HIN-E14	4

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Master of Science in Analytical Chemistry

(M.Sc. in Analytical Chemistry)

(Self-Financed)

Programme Code: PGM-CHE

Duration: Two Years (Four Semesters)

Aim of the Programme:

Analytical Chemistry forms the basis of research not only in field of Chemistry but also in many other branches of Sciences. Thus, it provides the scope for recruitment of students in research fields as Research Scholars, Research Associates and Project Assistants. Pharmaceutical industries look for skillful analytical chemists. Goa being a center for many multinational pharmaceutical companies, Analytical Chemistry is a potential field for providing employment.

Analytical Chemistry, being an experimental science, addresses the students' training needs by focusing on practical work so as to help them to acquire expertise in performing experiments and to handle sophisticated instruments. The data obtained needs statistical analysis to establish authenticity in the fields like environmental science, space chemistry and biotechnology. There are immense potentialities for post graduates to undertake advanced research or be employed in industries as skilled chemists.

The course gives an introduction to all branches of chemistry including basic analytical methods. It provides a sound background in understanding fundamental concepts, good laboratory practices, data management and analysis with extrapolation of results; design of experiment, planning a safe working practice including evaluation of hazards and environmental effects; achieve a common research goal working in a small team; self-led practical-based research, especially on characterization based on analytical instrumentation methods like spectroscopy, chromatography and many more with appreciation of issues in each of these fields on the current research.

Eligibility and Selection Procedure:

Admission to the two year, four semesters, full time course leading to the degree in Master of Science in Analytical Chemistry is open to any candidate completing B. Sc. Examination, scoring minimum 60 % pass percentage with 6 Units Chemistry along with Analytical Chemistry as one of the course. The selection of the candidate for PG is purely on merit, based on the performance of student at T.Y. B. Sc. University Examination.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
630.00	78000.00	1000.00	420.00	420.00	120.00	5000.00	10000.00	95590.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.
‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University. Reg. Fee	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
0.00	78000.00	1000.00	420.00	420.00	58.00	5000.00	10000.00	94898.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	**Nature of Courses**	**Credits Required**
1	Core (General) Courses	24
2	Core (Analytical Chemistry) Courses	16
3	Elective (General) Courses	16
4	Elective (Analytical Chemistry) Courses	24
	Total Credits	80

Course Structure – M.Sc. in Analytical Chemistry

PGM-CHE	**Odd Semester**	**Even Semester**
Part One	**First Semester**	**Second Semester**
	Core Course Credits – 12	Core Course Credits – 12
	Elective Courses Credits – 08	Elective Courses Credits – 08
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**
Part Two	**Third Semester**	**Fourth Semester**
	Core Course Credits (Analytical Chemistry) – 08	Core Course Credits (Analytical Chemistry) – 08
	Elective Courses Credits (Analytical Chemistry) – 12	Elective Courses Credits (Analytical Chemistry) – 12
	Total Third Semester Credits = 20	**Total Fourth Semester Credits = 20**

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
CORE COURSES (SEMESTER I AND II)			
1	Spectroscopy in Chemistry	PGM-CHE-AC-C401	4
2	Laboratory Course in Analytical Chemistry	PGM-CHE-AC-C402	2
3	General Inorganic Chemistry	PGM-CHE-IC-C401	4
4	Laboratory Course in Inorganic Chemistry	PGM-CHE-IC-C402	2
5	Fundamentals of Organic Chemistry	PGM-CHE-OC-C401	4
6	Laboratory Course in Organic Chemistry	PGM-CHE-OC-C402	2
7	General Physical Chemistry	PGM-CHE-PC-C401	4
8	Laboratory Course in Physical Chemistry	PGM-CHE-PC-C402	2
CORE COURSES (ANALYTICAL CHEMISTRY) (SEMESTER III AND IV)			
1	Fundamentals of Chemical Analysis	PGM-CHE-AC-C501	4
2	Separation Techniques	PGM-CHE-AC-C503	4
3	Techniques in Chemical Analysis	PGM-CHE-AC-C504	4
4	Experiments In Analytical Chemistry	PGM-CHE-AC-C505	4

Course Information (b)

Sr. No.	Course Title	Course Code	Course Credits
ELECTIVE COURSES (SEMESTER I AND II)			
1	Analytical Techniques	PGM-CHE-AO-E401	2
2	Electro Analytical Techniques - I	PGM-CHE-AO-E402	2
3	Electro Analytical Techniques - II	PGM-CHE-AO-E403	2
4	Topics in Inorganic Chemistry	PGM-CHE-IO-E401	2
5	Environmental Control and Chemical Analysis	PGM-CHE-IO-E402	2
6	Reaction Mechanisms in Organic Chemistry	PGM-CHE-OO-E401	2
7	Reagents in Organic Synthesis	PGM-CHE-OO-E402	2
8	Topics in Physical Chemistry	PGM-CHE-PO-E401	2
9	Diffraction Methods	PGM-CHE-PO-E402	2
ELECTIVE COURSES (ANALYTICAL CHEMISTRY) (SEMESTER III AND IV)			
10	QA and QC in Analytical Chemistry	PGM-CHE-AO-E501	2
11	Bio analytical Chemistry	PGM-CHE-AO-E502	2
12	Calibrations and Validation	PGM-CHE-AO-E503	2
13	Advanced Mass Spectrometry	PGM-CHE-AO-E504	2
14	Applied Analytical Chemistry	PGM-CHE-AO-E505	2
15	Advanced NMR Spectroscopy	PGM-CHE-AO-E506	2
16	Chemo metrics	PGM-CHE-AO-E507	2
17	Dissertation	PGM-CHE-GO-E508	8
18	Modules in Experimental Chemistry	PGM-CHE-AO-E509	4
19	Internship Module	PGM-CHE-AO-E510	4
20	Spectral Methods of Analysis	PGM-CHE-AO-E511	4

For additional information contact:
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Master of Science in Geoinformatics

(M.Sc. in Geoinformatics)

(Self-Financed)

Programme Code: PGM-GIS

Duration: Two Years (Four Semesters)

Aim of the Programme:

The aim of M.Sc in Geoinformatics is to develop students with strong practical and theoretical knowledge of diverse disciplines in geospatial technology and professional skills through various activities and initiatives of the department enabling them to acquire software skills and knowledge in order to improve their employability. The programme also includes courses which guide the students towards improving research writing skills. The students undertake and work on live projects in national research institutes like NRSC, IIRS & NIO to get hands-on experience. The main focus is on research, entrepreneurship, teaching and geospatial skill.

Eligibility and Selection Procedure:

A graduate with a minimum score of 50% (CGPA of 5.3 and above in case of CBCS) in the final Examination of any B.Sc. programme or M.A. with Geography from a recognized University/Institute is eligible. Students with courses related to earth science may also apply; however, their selection will be based on their performance in the Aptitude Test in Geography, conducted by the department.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
630.00	39100.00	1000.00	420.00	420.00	130.00	1500.00	10000.00	53200.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Project Fee	Student Service Charges	TOTAL FEES‡
39100	1000.00	420.00	420.00	130.00	1500.00	2000.00	10000.00	54570.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	40
2	Elective Courses	40
	Total Credits Required	80

Course Structure – M.Sc. in Geoinformatics

PGM-GIS	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core Course Credits – 08	Core Course Credits - 08
	Elective Courses Credits – 12	Elective Courses Credits - 12
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**
Part Two	**Third Semester**	**Fourth Semester**
	Core Course Credits – 04	Core Course– Credits - 20
	Elective Courses Credits – 16	
	Total Third Semester Credits = 20	**Total Fourth Semester Credits = 20**

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
CORE COURSES			
	SEMESTER I		
1	Basics of GIS and GPS	PGM-GIS-C1	4
2	Basic of RS and Photogrammetry	PGM-GIS-C2	4
	SEMESTER II		
3	Spatial Analysis & Modelling	PGM-GIS-C3	4
4	Advanced Remote Sensing and GIS	PGM-GIS-C4	4
	SEMESTER III		
5	GIS in Urban and Regional Planning	PGM-GIS-C5	4
	SEMESTER IV		
6	Project Work	PGM-GIS-C6	20
Each course assigns 02 credits for Theory and 02 credits for Practical work.			

Course Information (b)

Sr. No.	Course Title	Course Code	Course Credits
ELECTIVE COURSES			
1	Digital Cartography	PGM-GIS-E1	4
2	Geo-statistics	PGM-GIS-E2	4
3	Principles of Computer and Programming	PGM-GIS-E3	4
4	Digital Image Processing	PGM-GIS-E4	4
5	Programming & Customization	PGM-GIS-E5	4
6	Field techniques and Report writing	PGM-GIS-E6	4
7	GIS for Disaster Management	PGM-GIS-E7	
8	WEB GIS and its Application in GIS	PGM-GIS-E8	4
9	Research methodology	PGM-GIS-E9	4
10	Applications of GIS in Resource Management	PGM-GIS-E10	4
11	Applications of GIS in Agriculture and Soil	PGM-GIS-E11	4
Each course assigns 02 credits for Theory and 02 credits for Practical work.			

For additional information contact:
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Master of Science in Information Technology

(M.Sc. in Information Technology)

(Self-Financed)

Programme Code: PGM-IT

Duration: Two Years (Four Semesters)

Aim of the Programme:

The aim of M.Sc. in Information Technology is to provide the students with strong theoretical and practical knowledge of different disciplines in Information Technology and to develop their skills in software development and research so that they become competent to join the IT industry or academic organizations.

MSc IT curriculum includes core courses in Data Mining, Advanced Database Management Systems, Design & Analysis of Algorithms, Information Retrieval etc. The elective courses include Computer Graphics, Mobile Computing, Natural Language Processing etc.

Apart from regular lectures, presentations and assignments, the department also organizes workshops and lectures on recent technologies delivered by industry professionals. Student's projects and assignments undergo rigorous verification & validation by faculty and industry experts. The students undertake and work on live projects through FOSS (Free Open Source Software) Club to get hands-on experience.

Eligibility and Selection Procedure:

Candidates with B.Sc. (Computer Science) / B.C.A. /B. Voc (Software Development)/ Equivalent degree with a minimum score of 55% at degree level are eligible. Candidates with a score of 60% and above at P.G.D.C.A. and at least a minimum 50% at B.Sc. (Computer Science) /B.C.A. /Equivalent are also eligible to apply. Selection of candidates is done on merit and on the basis of their previous courses of study.

Total Number of Seats (including reserved seats): 20

Total Fees (₹) for Part I (Semesters 1 and 2):

University Reg. Fee*	Tuition	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Laboratory Fee	Student Service Charges	TOTAL FEES‡
630.00	87580.00	2000.00	420.00	420.00	120.00	5000.00	10000.00	106170.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Total Fees (₹) for Part II (Semesters 3 and 4):

University . Reg. Fee	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	Laboratory Fee	Student Service Charges	TOTAL FEES‡
0.00	86015.00	2000.00	420.00	420.00	120.00	5000.00	10000.00	103975.00

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 80

Sr. No.	Nature of Courses	Credits Required
1	Core Theory Courses	28
2	Core Laboratory Courses	12
3	Elective Courses	32
4	Elective Project or Dissertation	8
	Total Credits Required	80

Course Structure – M.Sc. in Information Technology

PGM-IT	Odd Semester	Even Semester
Part One	**First Semester**	**Second Semester**
	Core Theory Courses Credits – 08	Core Theory Courses Credits – 12
	Core Laboratory Courses Credits – 04	Core Laboratory Courses Credits – 06
	Elective Courses Credits – 12	Elective Courses Credits – 06 Credits
	Total First Semester Credits = 24	**Total Second Semester Credits = 24**
Part Two	**Third Semester**	**Fourth Semester**
	Core Theory Courses Credits – 08	Elective Course Credits (Project or Dissertation) – 08
	Core Laboratory Courses Credits – 02	
	Elective Courses Credits – 14	
	Total Third Semester Credits = 24	**Total Fourth Semester Credits = 08**

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester I		
1	Data Structures and Algorithms	PGM-IT-C1	4
2	Operating Systems and Networks	PGM-IT-C2	4
3	Data Structures and Algorithms Lab (Lab – I)	PGM-IT-C3	2
4	Operating Systems and Networks Lab (Lab – II)	PGM-IT-C4	2
	Semester II		
5	Software Architecture, Design Patterns and Frameworks	PGM-IT-C5	4
6	Design and Analysis of Algorithms	PGM-IT-C6	4
7	Advanced Database Management Systems	PGM-IT-C7	4
8	Software Architecture, Design Patterns and Frameworks Lab (Lab – III)	PGM-IT-C8	2
9	Design and Analysis of Algorithms Lab (Lab – IV)	PGM-IT-C9	2
10	Advanced Database Management Systems Lab (Lab – V)	PGM-IT-C10	2
	Semester III		
11	Data Mining	PGM-IT-C11	4
12	Information Retrieval	PGM-IT-C12	4
13	Data Mining and Information Retrieval Lab (Lab VI)	PGM-IT-C13	2

Course Information (b)

Sr. No.	Course Titles	Course Code	Course Credits
	ELECTIVE COURSES		
1	Applied Probability and Statistics	PGM-IT-E1	4
2	Communication Skills Course	PGM-IT-E2	4
3	Software Metrics & Project Management	PGM-IT-E3	4
4	Mobile Computing	PGM-IT-E4	4
5	Compiler Design	PGM-IT-E5	4
6	Computer Graphics	PGM-IT-E6	4
7	Natural Language Processing	PGM-IT-E7	4
8	Image Processing	PGM-IT-E8	4
9	Middleware Technology	PGM-IT-E9	4
10	Software Testing	PGM-IT-E10	4
11	Cloud Computing	PGM-IT-E11	4
12	Network Security	PGM-IT-E12	4
13	Communication Skills Course	PGM-IT-E13	4
14	Applied Probability and Statistics	PGM-IT-E14	4
15	Machine Learning	PGM-IT-E15	4
16	Statistical Computing	PGM-IT-E16	2
17	Educational Technology	PGM-IT-E17	2
18	Project (Semester 4)	PGM-IT-E18	8
19	Dissertation (Semester 4)	PGM-IT-E19	8

For additional information contact:

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Postgraduate Diploma Programmes

Post-Graduate Diploma in Clinical Genetics and Medical Laboratory Techniques

(Self-Financed)

Programme Code: PGD-CGMLT

Duration: One Year, Two Semesters

Aim of the Programme:

Overall the course is designed to provide a strong foundation in all areas of Human genetics and medical lab techniques with opportunities for hands-on laboratory and clinical experience. The curriculum includes lectures, practicals, classroom discussions and intensive practical training (Internship).

The Objective of the courses is to enable the students in having job opportunities in Research and Development and in medical field. The course syllabus is designed considering the need for trained technicians and technologists in the genetic and pathological field. This self financed, job oriented course will meet the demand for genetic and pathological technicians in diagnostic labs and hospitals.

Eligibility and Selection Procedure:

To be eligible for admission to the programme leading to the award of Post Graduate Diploma in Clinical Genetics and Medical Laboratory Techniques/ Certificate Programme, the candidate must have passed the Bachelor's Degree examination of this University or the equivalent examination of any other recognized University, securing a minimum of 45% marks on aggregate or equivalent Grade or as specified for a specific Programme in Biological Science (Science graduate with Zoology, Microbiology, Biotechnology -6 units / or 3 units, with chemistry up to SYBSc).

Total Number of Seats (including reserved seats): 15

Total Fees (₹):

University. Reg. Fee*	Tuition Fee	Library Fee	Gymkhana Fee	Student Activity Fee	Students' Aid Fund Contribution	. Lab. Fee	Student Service Charges	TOTAL FEES‡
630.00	25000.00	1000.00	250.00	400.00	120.00	35000.00	10000.00	72400.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required to complete the Programme: 40+08

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	20
2	Elective Courses	20
3	Internship/Hands on Training (Compulsory)	08*
	Total Credits	40 + 08

*08 credits of Internship/Hands on Training are not considered for calculating the CGPA.

Course Structure – Post-Graduate Diploma in Clinical Genetics and Medical Laboratory Techniques

PGD-CGMLT	Odd Semester	Even Semester
Courses	**First Semester**	**Second Semester**
	Core Courses Credits – 12	Core Courses Credits – 08
	Elective Courses Credits – 08	Elective Courses Credits – 12
	Total First Semester Credits = 40	**Total Second Semester Credits = 40**
Students need to complete **Internship/Hands on training involving 08 credits** on completion of Second Semester.		

Course Information

Sr. No.	Course Title	Course Code	Course Credits
	SEMESTER I		
	Core Courses		
1	Clinical Genetic Techniques I	PGD-CGMLT-C1	4
2	Clinical Biochemistry I	PGD-CGMLT-C2	4
3	Clinical Microbiology (General and Systemic)	PGD-CGMLT-C3	4
	Elective Courses		
4	Clinical Pathology and Histopathology	PGD-CGMLT-E1	4
5	Analytical Techniques (SWAYAM online course)	PGD-CGMLT-E2	4
6	Essentials of Biomolecules: Nucleic Acids and Peptides (SWAYAM online course)	PGD-CGMLT-E3	4
	Semester II		4
	Core Courses		
7	Clinical Genetic Techniques II	PGD-CGMLT-C4	4
8	Clinical Biochemistry II	PGD-CGMLT-C5	4
	Elective Courses		
9	Clinical Parasitology, Mycology and Virology	PGD-CGMLT-E4	4
10	Haematology and Transfusion Medicine	PGD-CGMLT-E5	4
11	Biomolecules: Structure, Function in Health and Disease (SWYAM online course)	PGD-CGMLT-E6	4
12	Immunology (SWYAM online course)	PGD-CGMLT-E7	4
Each non-SWYAM course carries 03 credits of theory component and 01 credit of practical component			

For additional information contact:
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Post-Graduate Diploma in Geoinformatics

(Self-Financed)

Programme Code: PGD-GIS

Duration: One Year, Two Semesters

Aim of the Programme:

The aim of Post graduate diploma in Geoinformatics (PGDGIS) is to develop students with strong knowledge of Geospatial technology and professional skills through various activities and initiatives of the department enabling them to acquire software skills and knowledge in order to improve their employability.

Eligibility and Selection Procedure:

A graduate with a minimum score of 50% (CGPA of 5.3 and above in case of CBCS) in the final Examination of any B.Sc. programme or B.A. with Geography from a recognized University/Institute is eligible. Students with courses related to earth science may also apply; however, their selection will be based on their performance in the Aptitude Test in Geography, conducted by the department.

Total Number of Seats (including reserved seats): 20

Total Fees (₹):

University Reg. Fee*	Tuition Fee	Students' Aid Fund Contribution	Gymkhana Fee	Library Fee	Student Activity Fee	Laboratory Fees	Students Service Charges	TOAL FEES‡
630.00	39100.00	130.00	420.00	1000.00	420.00	1500.00	10000.00	53200.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the programme: 40

Sr. No.	**Nature of Courses**	**Credits Required**
1	Core Courses	20
2	Elective Courses	20
	Total Credits	40

Course Structure – Post-Graduate Diploma in Geoinformatics

PGD-GIS	Odd Semester	Even Semester
Courses	**First Semester**	**Second Semester**
	Core Courses - Credits 12	Core Courses - Credits 08
	Elective Courses - Credits 08	Elective Courses - Credits 12
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
CORE COURSES			
Semester I			
1	Basics of GIS and GPS	PGD-GIS-C1	**4**
2	Geo-statistics	PGD-GIS-C2	**4**
3	Basic of RS and Photogrammetry	PGD-GIS-C3	**4**
Semester II			
4	Spatial Analysis and Modelling	PGD-GIS-C4	**4**
5	Advanced Remote Sensing and GIS	PGD-GIS-C5	**4**

Course Information (b)

Sr. No.	Course Title	Course Code	Course Credits
ELECTIVE COURSES			
1	Digital Cartography	PGD-GIS-E1	**4**
2	Principles of Computer and Programming	PGD-GIS-E2	**4**
3	Digital Image Processing	PGD-GIS-E3	**4**
4	GIS for Environmental Management	PGD-GIS-E4	**4**
5	Pilot Project, Filed Work and Tour	PGD-GIS-E5	**4**
6	Application of GIS in Agriculture and Soil	PGD-GIS-E6	**4**

For additional information contact:
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Post-Graduate Diploma in Computer Applications

(Government Aided)

Programme Code: PGD-CA

Duration: One Year, Two Semesters

Aim of the Programme:

The **P.G.D.C.A.** programme aims to give the students a sound background in theory and practice of Computer Application in various fields. It comprises of various Software courses, Skill Based Elective courses and courses on Educational Technology. The choice of Elective courses is based on different career options. The syllabus of the course conforms to the requirements prescribed by the Goa University with upward mobility to M.Sc. (IT) programme and is recognized as a professional course by the Goa University.

On completion of the programme, the career opportunities available would be in the field of Software Testing, Digital Marketing, Web Development, Network Administration, Mobile Application Development, etc. This programme is an essential qualification for school computer teachers. The College has a placement cell which assists student in placements.

Eligibility and Selection Procedure:

To be eligible to apply for the programme, the candidate must be a graduate having completed B.Com / B.A/ B.Sc / B.B.A/ B.C.A /B.Ed / B.E/ or any other degree. Final selection is based on the outcome of the Department's counseling sessions with the applicants.

Total Number of Seats (including reserved seats): 30

Total Fees (₹):

University Reg. Fee*	Tuition	Exam Fee	Library Fee	Gymkhana Fee	Other Fees	Students' Aid Fund Contribution	Computer Lab Fee	IAIMS Fee$^{\phi}$	Student Service Charges	TOTAL FEES‡
630.00	2230.00	4150.00	470.00	420.00	420.00	130.00	2150.00	225.00	10000.00	20825.00

*For students coming from Universities other than the Goa University, the University Registration Fee is ₹3675.00.

$^{\phi}$ IAIMS Fee (Integrated Academic Information Management System software Fee). ‡Additionally, students have to pay examination fees semester-wise, calculated on the basis of credits of the courses they are attempting.

Credits required for completing the Post-Graduate Diploma in Computer Applications: 40

Sr. No.	Nature of Courses	Credits Required
1	Core Courses	20
2	Elective Courses	20
	Total Credits	40

Course Structure – Post-Graduate Diploma in Computer Applications

PGD-CA	Odd Semester	Even Semester
Courses	**First Semester**	**Second Semester**
	Core Courses Credits – 12	Core Courses Credits – 08
	Elective Courses Credits – 08	Elective Courses Credits – 12
	Total First Semester Credits = 20	**Total Second Semester Credits = 20**

Course Information (a)

Sr. No.	Course Titles	Course Codes	Course Credits
	CORE COURSES		
	Semester I		
1	Problem Solving and Introduction to Programming	PGD-CA-C1	4
2	Data Base Management Systems	PGD-CA-C2	4
3	Client Side Technologies	PGD-CA-C3	4
	Semester II		
4	Computer Networking	PGD-CA-C5	4
5	Software Engineering	PGD-CA-C6	4
All courses entail 03 hours of lectures and 02 hour of practical work per week.			

Course Information (b)

Sr. No.	Course Titles	Course Codes	Course Credits
	ELECTIVE COURSES		
1	Multimedia	PGD-CA-E1	4
2	E-Learning	PGD-CA-E2	4
3	HCI	PGD-CA-E3	4
4	E-commerce	PGD-CA-E4	4
5	Digital Marketing	PGD-CA-E5	4
6	Network Administration	PGD-CA-E6	4
7	Software Testing	PGD-CA-E7	4
8	Server Side Programming	PGD-CA-E8	4
9	Data Structures	PGD-CA-E9	4
10	Office Automation Tools	PGD-CA-E10	4
11	Assessment and Evaluation for Learning	PGD-CA-E11	4
12	Instructional Design	PGD-CA-E12	4
13	Content Management System	PGD-CA-E13	4
All courses entail 03 hours of lectures and 02 hour of practical work per week.			

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