



Chowgule Education Society's

Parvatibai Chowgule College of Arts and Science (Autonomous)

Accredited by NAAC with Grade 'A+'
Best Affiliated College-Goa University Silver Jubilee Year Award



PROSPECTUS

For P.G. Degree & Diploma Programmes

2023-2024

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Introduction

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+ in 2022.

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 Child Psychology and Child Development
2. Master of Arts in English
3. Master of Arts in Geography
4. Master of Science in Analytical Chemistry
5. Master of Science in Geoinformatics
6. 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/>

Complete the online admission form as per instructions provided therein.

For further details and queries:

Email: sfpadmission@chowgules.ac.in

Postgraduate Degree Programmes

2023 -2024

Master of Arts in Child Psychology and Child Development

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

(Self-Financed)

Programme Code: PGMP-PSY

Duration: Two Years (Four Semesters)

Objectives 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 specifically 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 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 conducted at the college level. 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): ₹ 83130/-

Total Fees for Part II (Semesters 3 and 4): ₹ 81800/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Discipline Specific Core (DSC)	32
2	Discipline Specific Elective (DSE)	16
3	Discipline Specific Research Electives (DSRE)	12
4	Generic Elective (GE)	04
5	Discipline Specific Research or Internship (DSR/I)	16
	Total Credits Required	80

Course Structure - M.A. in Child Psychology and Child Development

PGM-PSY	Odd Semester	Even Semester
	First Semester	Second Semester
Part One	Child Psychopathology -04	Counseling Approaches - 04
	Research Methodology for Psychology-I - 04	Research Methodology for Psychology-II - 04
	Advanced Statistics for Psychology-04	Research Writing - 04
	Counseling Therapies for Children I-04	Counseling Therapies for Children II-04
	Discipline Specific Elective I-04	Discipline Specific Elective II-04
	Total First Semester Credits =20	Total Second Semester Credits = 20
	Third Semester	Fourth Semester
Part Two	Discipline Specific Elective III-04	Research Specific Elective Practical - I - 02
	Discipline Specific Elective IV - 04	Research Specific Elective Practical - II - 02
	Research Specific Elective-I - 04	Discipline Specific Research or Internship-16
	Research Specific Elective-II-04	
	Generic Elective I -04	
	Total Third Semester Credits = 20	Total Fourth Semester Credits = 20

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
SEMESTER I			
Core Courses			
1	Child Psychopathology	PGMP-PSY-DSC-401	04
2	Research Methodology for Psychology-I	PGMP-PSY-DSC-402	04
3	Advanced Statistics for Psychology	PGMP-PSY-DSC-403	04
4	Counseling Therapies for Children I (Practical)	PGMP-PSY-DSC-404	04
Discipline Specific Elective (Any 1)			
1	Child Development	PGMP-PSY-DSE-401	04
2	Pediatric Psychology	PGMP-PSY-DSE-402	04
3	Child & Crime	PGMP-PSY-DSE-403	04
SEMESTER II			
Core Courses			
1	Counseling Approaches	PGMP-PSY-DSC-405	04
2	Research Methodology for Psychology-II	PGMP-PSY-DSC-406	04
3	Research Writing	PGMP-PSY-DSC-407	04
4	Counseling Therapies for Children II (Practical)	PGMP-PSY-DSC-408	04
Discipline Specific Elective (Any 1)			
1	Children with Special needs	PGMP-PSY-DSE-404	04
2	Early Childhood Education	PGMP-PSY-DSE-405	04
3	Rehabilitation Psychology	PGMP-PSY-DSE-406	04
SEMESTER III			
List of Discipline Electives			
1	Positive Psychology	PGMP-PSY-DSE-407	04
2	Psychology of Adolescence	PGMP-PSY-DSE-408	04
3	Theories of Personality	PGMP-PSY-DSE-409	04
4	NGO Management	PGMP-PSY-DSE-410	04
<i>Note: Students can opt for any two Discipline Electives from above & complete 8 credits</i>			
List of Research Electives			
1	Management of Learning Disabilities	PGMP-PSY-DSRE-401	04
2	Child Development – Practicum	PGMP-PSY-DSRE-402	04
3	School Counseling	PGMP-PSY-DSRE-403	04
4	Counseling with Parents	PGMP-PSY-DSRE-404	04
<i>Note: Students can opt for any two Research Electives from above & complete 8 credits</i>			

	List of Generic Elective (For MA PSY Students)		
	To be opted from other PG departments		
	List of Generic Elective (To be offered by MA PSY)		
1	Personality Development	PGMP-PSY-GE- 401	04
2	Community Psychology	PGMP-PSY-GE- 402	04
3	Health Psychology	PGMP-PSY-GE- 403	04
4	Advanced Statistical Analysis	PGMP-PSY-GE- 404	04
	<i>Note: Total Minimum Credits for Generic Elective course is 4</i>		
SEMESTER IV			
Research Specific Elective Practical			
1	Management of Learning Disabilities – Research	PGMP-PSY-DSRE-405	02
2	Child & Crime – Research	PGMP-PSY-DSRE-406	02
3	School Counseling– Research	PGMP-PSY-DSRE-407	02
4	Counseling with Parents– Research	PGMP-PSY-DSRE-408	02
	<i>Note: Students can opt for any two Research Electives from above & complete 4 credits</i>		
1	Discipline Specific Research or Internship	PGMP-PSY-DSR/I-401	16

For additional information contact:

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Master of Arts in English

(M.A. in English)

(Self-Financed)

Programme Code: PGMP-ENG

Duration: Two Years (Four Semesters)

Objectives of the Programme:

The M.A. programme in English lays emphasis 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 while underscoring research, teaching, creative writing and writing for the media. The two year programme is a mix of core and elective papers with a blend of theory and skill based courses. A bridge course has also been designed to integrate new students into our system.

To attain this objective the department uses several innovative teaching-learning methods - interactive methods of teaching English language and literature, screening of films based on English novels and plays, use of audio-visuals in teaching. The Department also pays equal attention to the co-curricular and extracurricular activities, through their MA English student initiative-Ignite. Through this the students have organized community panel discussions, Book-chats, celebrated cultural days-Asian Literature Day, Gaia – World Literature Day and even Cosplay events such as-Mythos and also organized Symposium.

Eligibility and Selection Procedure:

Students who have completed B.A. with English (Honours/Single Major) or English (Regular/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 enroll 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 through a change of faculty exam conducted by the department prior to admission (provided seats are available).

Total Number of Seats (including reserved seats):20

Total Fees for Part I (Semesters 1 and 2):₹ 81430/-

Total Fees for Part II (Semesters 3 and 4):₹ 77500/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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
(Applicable for 2023 onwards batch as per NEP guidelines)

Course Structure- M. A. in English

Courses	Sem 1	Sem 2	Sem 3	Sem 4	Total Credits
Discipline Specific Core (DSC)	16	16			32
Discipline Specific Elective (DSE)	04	04	08		16
Generic Electives (GE)			04		04
Research Specific Elective (RSE)			08	04	12
Discipline Specific Dissertation /Internship (DSD/I)				16	16
Total credits	20	20	20	20	80

Course information (a)

Courses	SEM I	SEM II	SEM III	SEM IV
Discipline Specific Core (DSC)	<p align="center">(Credits - 16)</p> <p>1.PGMP –ENG-DSC- 401 English Poetry (Credits -4)</p> <p>2.PGMP –ENG-DSC- 402 Exploring Narratives in Fiction (Credits -4)</p> <p>3. PGMP –ENG-DSC-403 Twentieth Century English Drama (Credits -4)</p> <p>4. PGMP –ENG-DSC-404 Indian Literature in Translation (Credits-4)</p>	<p align="center">(Credits - 16)</p> <p>1.PGMP–ENG-DSC-405 Literary Theory (Credits -4)</p> <p>2.PGMP–ENG-DSC-406 Linguistics (Credits -4)</p> <p>3.PGMP –ENG-DSC-407 Asian Literature (Credits-4)</p> <p>4. PGMP –ENG-DSC-408 World Literature (Credits- 4)</p>	0	0
Discipline Specific Elective (DSE)	<p align="center">(Credits – 4)</p> <p>To be chosen from the pool of electives provided below.</p>	<p align="center">(Credits – 4)</p> <p>To be selected from the pool of electives provided below.</p>	<p align="center">(Credits -8)</p> <p>To be selected from the pool of electives provided below.</p>	0
Research Specific Elective Course (RSE)	0	0	<p align="center">(Credits – 8)</p> <p>1.PGMP –ENG-DSRE-501 Postcolonial: Theory and Practice (Credits-4)</p> <p>2. PGMP –ENG-DSRE-502 Gender and Sexuality (Credits- 4)</p>	<p align="center">(Credits -4)</p> <p>1.PGMP –ENG-DSRE- 503 Film Studies (Credits 4)</p>
Generic Elective Course (GE)	0	0	<p align="center">(Credits – 04)</p> <p>1.PGMP–ENG-GE- 501 Popular Literature (Credits-4) or</p> <p>2. PGMP–ENG-GE- 502 Technical Media Writing (Credits-4)</p>	
Discipline Specific Dissertation (DSD)/Internship	0	0	0	<p align="center">(Credits -16)</p> <p>1. PGMP –ENG-DSR/I- 501 Dissertation (DSD)/Internship</p>
Total Credits	20	20	20	20

POOL OF ELECTIVES (Sem I and Sem II)
PGMP-ENG-DSE-401 Modern European Literature
PGMP-ENG-DSE-402 Visual Literature- Perspectives
PGMP-ENG-DSE-403 Prose Writings
PGMP-ENG-DSE-404 Children's Literature
PGMP-ENG-DSE-405 World Subaltern: Aboriginal Narratives
PGMP-ENG-DSE-406 Shakespeare
PGMP-ENG-DSE-407 Creative Writing
POOL OF ELECTIVES (Sem III)
PGMP –ENG-DSE- 501 Technical and Media Writing
PGMP-ENG-DSE-502 Mythology, Archetype & Literature
PGMP-ENG-DSE-503 Women's Literature
PGMP-ENG-DSE-504 The Indian Subaltern: Dalit and Transgender Narratives
PGMP-ENG-DSE-505 ELLT (English Language and Literature Teaching)
PGMP-ENG-DSE-506 Green Studies

For additional information contact:

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Master of Arts in Geography

(M.A. in Geography)

(Self-Financed)

Programme Code: PGMP-GEG

Duration: Two Years (Four Semesters)

Objectives 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): 20

Total Fees for Part I (Semesters 1 and 2): ₹ 65491/-

Total Fees for Part II (Semesters 3 and 4): ₹ 64399/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Discipline Specific Core	32
2	Discipline Specific Electives	16
3	Generic Elective	04
4	Research Specific Elective	12
5	Dissertation/Internship	16
	Total Credits	80

Course Structure of M.A. in Geography

PGM-GEG	Odd Semester	Even Semester
Part One	First Semester	Second Semester
	Discipline Specific Core Credits-16	Discipline Specific Core Credits-16
	Discipline Specific Electives -04	Discipline Specific Electives -04
	Total First Semester Credits = 20	Total Second Semester Credits = 20
Part Two	Third Semester	Fourth Semester
	Generic Elective Course Credits-04	Dissertation/Internship-16
	Discipline Specific Electives- 04	
	Research Specific Courses Credits-12	Discipline Specific Elective Credits-04
	Total Third Semester Credits = 20	Total Fourth Semester Credits = 20

Course Information (a)

Sr. No.	Course Title (T/P)	Course Code	Course Credits
Semester I Level 400 Discipline Specific Core			
1.	Advanced Geomorphology (T/P)	PGMP –GEG-DSC- 401	4
2.	Advanced Climatology (T/P)	PGMP –GEG- DSC- 402	4
3.	Introduction to Remote Sensing	PGMP –GEG- DSC- 403	4
4.	Advanced Cartographic Skills in Geography	PGMP –GEG- DSC- 404	4
Semester II Level 400 Discipline Specific Core			
5.	Advanced Population Studies in Geography	PGMP –GEG-DSC- 405	4
6.	Advanced Economic Geography	PGMP –GEG- DSC- 406	4
7.	Introduction to Geographic Information System	PGMP –GEG- DSC- 407	4
8.	Field Techniques and Village Survey	PGMP –GEG- DSC- 408	4
Discipline Specific Elective			
9.	Advanced Regional Planning and Development	PGMP –GEG-DSE- 401	2

10.	Techniques of Regional Analysis	PGMP –GEG-DSE- 402	2
11.	Environment Impact Assessment	PGMP –GEG-DSE- 403	2
12.	Natural Resources Management in India	PGMP –GEG-DSE- 404	2
13.	Climate Change and Adaptations	PGMP –GEG-DSE- 405	2
14.	Techniques of Disaster Management, Mitigation and Resilience	PGMP –GEG-DSE- 406	2
15.	Geographical Thought	PGMP –GEG-DSE- 407	2
16.	Advanced Urban Geography	PGMP –GEG-DSE- 408	2
17.	Soil and Water Resource Management	PGMP –GEG-DSE- 409	2
18.	Geography of India	PGMP –GEG-DSE- 410	2
Generic Elective			
19.	Regional Perspectives of Geopolitics	PGMP –GEG-GE- 501	4
20.	Urbanisation and Society in 21 st Century	PGMP-GEG-GE-502	4
21.	Agro Meteorology	PGMP-GEG-GE-502	4
Discipline Specific Research Elective			
22.	Advanced Research Design	PGMP –GEG-DSRE- 401	4
23.	Advanced Quantitative Techniques in Geography	PGMP-GEG-DSRE- 402	4
24.	Research Applications in Physical Geography	PGMP-GEG-DSRE-403	4
25.	Research Applications in Human Geography	PGMP-GEG-DSRE-404	4
Semester IV Level 500 Discipline Specific Research or Internship			
26.	Dissertation/Internship	PGMP –GEG-DSR- 401	16

For additional information contact:
Dr. Adrian Ferro adf003@chowgules.ac.in

Master of Science in Analytical Chemistry

(M.Sc. in Analytical Chemistry)

(Self-Financed)

Programme Code: PGMP-CHE

Duration: Two Years (Four Semesters)

Objectives of the Programme:

Analytical Chemistry forms the basis of research not only in the 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 courses. The selection of the candidate for PG is purely on merit, based on the performance of the 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): ₹ 119030/-

Total Fees for Part II (Semesters 3 and 4): ₹ 117500/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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 : 80

Course Structure M.Sc Analytical Chemistry

Courses	Sem I	Sem II	Sem III	Sem IV	Total
Discipline Specific Course (DSC)	16	16			32
Discipline Specific Electives (DSE)	4	4	8		16
Generic Electives (GE)			4		4
Research Specific Electives (RSE)			8	4	12
Discipline Specific Dissertation (DSD)/Internship (I)				16	16
Total	20	20	20	20	80

Course Information (a)

SEMESTER I

COURSES	CREDITS	COURSE CODE
Discipline Specific Core (DSC)		
General Inorganic Chemistry	4	PGMP-CHE-DSC -401
General Physical Chemistry	4	PGMP-CHE-DSC -402
Fundamentals of Organic Chemistry	4	PGMP-CHE-DSC -403
Laboratory Course in Physical Chemistry	2	PGMP-CHE-DSC -404
Laboratory Course in Organic Chemistry	2	PGMP-CHE-DSC -405
Discipline Specific Electives (DSE)		
Reaction Mechanisms in Organic Chemistry	2	PGMP-CHE-DSE-401
Topics in Physical Chemistry	2	PGMP-CHE-DSE-402

SEMESTER II

COURSES	CREDITS	COURSE CODE
Discipline Specific Core (DSC)		
Spectroscopy in Chemistry	4	PGMP-CHE-DSC -406
Fundamentals of Chemical Analysis	4	PGMP-CHE-DSC -407
Spectral Methods of Analysis	4	PGMP-CHE-DSC -408
Laboratory Course in Analytical Chemistry	2	PGMP-CHE-DSC -409
Laboratory Course in Inorganic Chemistry	2	PGMP-CHE-DSC -410
Discipline Specific Electives (DSE)		
Topics in Inorganic Chemistry	2	PGMP-CHE-DSE-403
Diffraction Methods	2	PGMP-CHE-DSE-404

For additional information contact:

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Master of Science in Geoinformatics

(M.Sc. in Geoinformatics)

(Self-Financed)

Programme Code: PGMP-GIS

Duration: Two Years (Four Semesters)

Objectives 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 skills.

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): ₹ 70005/-

Total Fees for Part II (Semesters 3 and 4): ₹ 68138/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Discipline Specific Core	32
2	Discipline Specific Elective	16
3	Generic Elective	04
4	Research Specific Elective	12
5	Project /Internship	16
	Total Credits Required	80

Course Structure - M.Sc. in Geoinformatics

PGM-GIS	Odd Semester	Even Semester
Part One	First Semester	Second Semester
	Discipline Specific Core - 16	Discipline Specific Core – 16
	Discipline Specific Elective - 04	Discipline Specific Elective – 04
	Total First Semester Credits = 20	Total Second Semester Credits = 20
Part Two	Third Semester	Fourth Semester
	Research Specific Elective - 12	Project - 16
	Generic Elective 04	
	Discipline Specific Elective 04	Discipline Specific Elective 04
	Total Third Semester Credits = 20	Total Fourth Semester Credits = 20

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
SEMESTER I			
1.	Basics of GIS and GPS	PGMP-GIS-DSC-401	4
2.	Basics of Remote Sensing and Photogrammetry	PGMP-GIS-DSC-402	4
3.	Advanced of Geostatistics	PGMP-GIS-DSC-403	4
4.	Advanced Digital Cartography	PGMP-GIS-DSC-404	4
5.	Principles of Computer and Programming	PGMP-GIS-DSE-401	4
6.	Applications of GIS Techniques in Entrepreneurship	PGMP-GIS-DSE-402	4
SEMESTER II			
7.	Spatial Analysis & Modeling	PGMP-GIS-DSC- 405	4
8.	Advanced Remote Sensing and GIS	PGMP-GIS-DSC-406	4

9.	Digital Image Processing	PGMP-GIS-DSC-407	4
10.	Field techniques and Report writing	PGMP-GIS-DSC-408	4
11.	Programming & Customization	PGMP-GIS-DSE- 403	4
	GIS for Business and Service Planning	PGMP-GIS-DSE-404	4
SEMESTER III			
12.	Applications of GIS in Urban and Regional Planning	PGMP-GIS-DSE-501	4
13.	Advanced Research Methodology	PGMP-GIS-RSE- 501	4
14.	Research Applications in Resource Management	PGMP-GIS-RSE-502	4
15.	Research Applications in Agriculture and Soil	PGMP-GIS-RSE-503	4
16.	WEB GIS and development of web Application	PGMP-GIS-GE-501	4
SEMESTER IV			
17.	Project/ Internship	PGMP-GIS-I-501	16
Elective subject			
18.	Applications of GIS in Disaster Management/Agriculture/Urban Planning/Tourism etc. (Online)	PGMP-GIS-DSE-502	4

For additional information contact:

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Master of Science in Information Technology

(M.Sc. in Information Technology)

(Self-Financed)

Programme Code: PGMP-IT

Duration: Two Years (Four Semesters)

Objectives 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 Discipline Specific Core (DSC) courses in Operating Systems and Networks, Advanced Database Management Systems, Machine Learning, and Design & Analysis of Algorithms etc. The discipline specific elective (DSE) courses include Data Mining, Cloud Computing, Web Development Frameworks, Mobile Application Development to name a few. From the new academic year 2023-2024 MSc IT will also have Discipline Specific Research Electives (DSRE) such as Research Methodology, Data Analytic, Neural Network and Deep Learning, and 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.

Fourth Semester of MSc IT is entirely for Industrial Internship or Dissertation work. The department placement team and well connected alumni network facilitate students appear the selection process of various IT companies in Goa and neighboring states. After successful completion of their internships most students get absorbed in the same companies as regular employees. NIC Goa, IMMO Tech, Creative Capsule, Anant Infomedia, 3D Systems, OPSPL, Numadic, Spintly, BigDev are names of some companies worth mentioning where our students did their internships from and continue to excel.

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 on the basis of their performance at the Admission Ranking Test.

Total Number of Seats (including reserved seats): 20

Total Fees for Part I (Semesters 1 and 2): ₹ 126030/-

Total Fees for Part II (Semesters 3 and 4): ₹ 125000/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Discipline Specific Core (DSC) Theory Courses	22
2	Discipline Specific Core (DSC) Laboratory Courses	10
3	Discipline Specific Elective (DSE) Courses	16
4	Discipline Specific Research Elective (DSRE) Courses	12
5	Generic Elective	04
6	Industrial Project or Dissertation	16
	Total Credits Required	80

Course Structure - M.Sc. in Information Technology

PGPM-IT	Odd Semester	Even Semester
	First Semester	Second Semester
Part One	Core Theory Courses Credits - 12	Core Theory Courses Credits - 10
	Core Laboratory Courses Credits - 04	Core Laboratory Courses Credits - 06
	Elective Courses Credits - 04	Elective Courses Credits - 04
	Total First Semester Credits = 20	Total Second Semester Credits = 20
	Third Semester	Fourth Semester
Part Two	Discipline Elective Courses Credits - 08	Industrial Project or Dissertation Credits - 16
	Research Elective Courses Credits- 12	
	Generic Elective- 04	
	Total Third Semester Credits = 24	Total Fourth Semester Credits = 16

Course Information (a)

Sr. No.	Course Titles	Course Code	Course Credits
	CORE COURSES		
	Semester I		
1	Advanced Data Structures and Algorithms	PGMP-IT-DSC-401	4
2	Operating Systems and Networks	PGMP-IT-DSC-402	4
3	Machine Learning	PGMP-IT-DSC-403	4
4	Data Structures and Algorithms Lab	PGMP-IT-DSC-404	2
5	Operating Systems and Networks Lab	PGMP-IT-DSC-405	2
	Semester II		
6	Design and Analysis of Algorithms	PGMP-IT-DSC-406	4
7	Advanced Database Management Systems	PGMP-IT-DSC-407	4
8	Software Architecture, Design Patterns and Frameworks	PGMP-IT-DSC-408	2
9	Design and Analysis of Algorithms Lab	PGMP-IT-DSC-409	2
10	Advanced Database Management Systems Lab	PGMP-IT-DSC-410	2
11	Software Architecture, Design Patterns and Frameworks Lab	PGMP-IT-DSC-411	2

Course Information (b)

Sr. No.	Course Titles	Course Code	Course Credits
	SEMESTER 1: DISCIPLINE SPECIFIC ELECTIVES I		
1	Cloud Computing	PGMP-IT-DSE-401	4
2	Software Quality Assurance and Testing	PGMP-IT-DSE-402	4
3	Computer Graphics	PGMP-IT-DSE-403	4
4	Compiler Design	PGMP-IT-DSE-404	4
	SEMESTER 2: DISCIPLINE SPECIFIC ELECTIVES II		
5	Web Development Frameworks	PGMP-IT-DSE-405	4
6	Mobile Application Development	PGMP-IT-DSE-406	4
7	Agile Methodology and DevOps	PGMP-IT-DSE-407	4
8	Cryptography and Network Security	PGMP-IT-DSE-408	4
	SEMESTER 3: DISCIPLINE SPECIFIC ELECTIVES III & IV		
9	Data Mining	PGMP-IT-DSE-501	4
10	Information Retrieval	PGMP-IT-DSE-502	4
11	Information Security	PGMP-IT-DSE-503	4
12	Parallel and Distributed Computing	PGMP-IT-DSE-504	4
13	Soft Computing	PGMP-IT-DSE-505	4
14	Digital Image Processing	PGMP-IT-DSE-506	4
	SEMESTER 3: DISCIPLINE SPECIFIC RESEARCH ELECTIVES I & II		
15	Research Methodology	PGMP-IT-DSRE-501	6
16	Data Analytic	PGMP-IT-DSRE-502	6
17	Modeling and Simulation	PGMP-IT-DSRE-503	6

18	Blockchain Technologies	PGMP-IT-DSRE-504	6
19	Natural Language Processing	PGMP-IT-DSRE-505	6
20	Neural Networks and Deep Learning	PGMP-IT-DSRE-506	6
21	Education Technology	PGMP-IT-DSRE-507	6
	SEMESTER 3: GENERIC ELECTIVE		
22	To be opted from other PG Departments		4
	Electives for Students of other PG Programmes		
23	Programming using Python	PGMP-IT-GE-501	4
24	Introduction to Web Designing	PGMP-IT-GE-502	4
25	Content Management System	PGMP-IT-GE-502	4
	SEMESTER 4: INTERNSHIP / DISSERTATION		
26	Industrial Internship	PGMP-IT-DSI-501	16
27	Dissertation	PGMP-IT-DSD-501	16

For additional information contact:

Mr. Gajanan Nial gpn000@chowgules.ac.in

Postgraduate Diploma Programmes

2023 -2024

Post-Graduate Diploma in Clinical Genetics and Medical Laboratory Techniques

(Self-Financed)

Programme Code: PGD-CGMLT

Duration: One Year (Two Semesters)

Duration for the PG Diploma in “Clinical Genetics and Medical Laboratory techniques” is a two semester programme which includes internship/hands-on training in Clinical Laboratories / Pathology Lab / Genetic Lab for 08 credits (240 hours).

Objectives 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.

Total Number of Seats (including reserved seats): 15

Total Fees: ₹ 86530/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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

PGDCG&MLT	Odd semester	Even semester
Courses	Discipline specific core (DSC)= 16	Discipline specific core (DSC)= 16
	Discipline specific elective (DSI)= 04 (Internship)	Discipline specific elective (DSI)= 04(Internship)
Credits	20	20
Total Credits: 40		

Course Structure - Post Graduate Diploma Programme in Clinical Genetics and Medical Laboratory Techniques (PGDCG&MLT)

Sr. No.	Course Title	Course Code	Course Credits
SEMESTER I			
Discipline Specific Core (DSC)			
1.	Clinical Biochemistry I	PGDP-CGMLT-DSC-401	4
2.	Clinical Biochemistry II	PGDP-CGMLT-DSC-402	4
3.	Clinical Microbiology (General and Systematic)	PGDP-CGMLT-DSC-403	4
4.	Hematology and Transfusion Medicine	PGDP-CGMLT-DSC-404	4
Discipline Specific Elective (DSE) (Any 01)			
5.	Internship at Hospital/Clinics.	PGDP-CGMLT-DSI-401	4
6.	SWAYAM course: Analytical Techniques	PGDP-CGMLT-DSE-401	4
7.	SWAYAM course: Essentials Of Biomolecules: Nucleic Acids And Peptides	PGDP-CGMLT-DSE-402	4
SEMESTER II			
Discipline Specific Core (DSC)			
8.	Clinical Genetic Techniques I	PGDP-CGMLT-DSC-405	4
9.	Clinical Genetic Techniques II	PGDP-CGMLT-DSC-406	4
10.	Clinical Parasitology, Mycology and Virology	PGDP-CGMLT-DSC-407	4
11.	Clinical Pathology and Histopathology	PGDP-CGMLT-DSC-408	4
Discipline Specific Elective (DSE) (Any 01)			
12.	Internship at Hospital/Clinics.	PGDP-CGMLT-DSI-402	4
13.	SWAYAM course- Biomolecules: Structure, Function In Health And Disease	PGDP-CGMLT-DSE-403	4
14.	SWAYAM course- Immunology	PGDP-CGMLT-DSE-404	4

For additional information contact:

Ms. Regina V. Fernandes rvf003@chowgules.ac.in

Post-Graduate Diploma in Geoinformatics

(Self-Financed)

Programme Code: PGDP-GIS

Duration: One Year (Two Semesters)

Objectives 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: ₹ 65530/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Discipline Specific Core	32
2	Discipline Specific Elective	08
	Total Credits Required	40

Course Structure - Post-Graduate Diploma in Geoinformatics

PGD-GIS	Odd Semester	Even Semester
Courses	First Semester	Second Semester
	Discipline Specific Core - Credits 16	Discipline Specific Core - Credits 16
	Discipline Specific Elective - Credits 04	Discipline Specific Elective - Credits 04
	Total First Semester Credits = 20	Total Second Semester Credits = 20

Course Information (a)

Sr. No.	Course Title	Course Code	Course Credits
Semester I			
1.	Basics of GIS and GPS	PGDP-GIS-DSC-401	4
2.	Basics of Remote Sensing and Photogrammetry	PGDP-GIS-DSC-402	4
3.	Applications of Geostatistics	PGDP-GIS-DSC-403	4
4.	Advanced Digital Cartography	PGDP-GIS-DSC-404	4
5.	Principles of Computer and Programming	PGDP-GIS-DSE-401	4
6.	Applications of GIS Techniques in Entrepreneurship	PGDP-GIS-DSE-402	4
		Total	20
Semester II			
7.	Spatial Analysis & Modeling	PGDP-GIS-DSC-405	4
8.	Advanced Remote Sensing and GIS	PGDP-GIS-DSC-406	4
9.	Digital Image Processing	PGDP-GIS-DSC-407	4
10.	Applications of GIS for Natural Resource management	PGDP-GIS-DSC-408	4
11.	Pilot Project, Field Work and Tour	PGDP-GIS-DSE-403	4
12.	Programming and Customization	PGDP-GIS-DSE-404	4
		Total	20

For additional information contact:

Dr. Anil S. Yedage asy002@chowgules.ac.in

Post-Graduate Diploma in Computer Applications

(Government Aided)

Programme Code: PGD-CA

Duration: One Year (Two Semesters)

Objectives of the Programme:

The PGDCA 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, courses on Educational Technology and latest emerging trends in the field of IT.

The choice of Elective courses is based on different career options, since the students who enroll for this course are from different domains like Arts, Science, Commerce etc. The syllabus of the course conforms to the requirements prescribed by the Goa University with upward mobility to the M.Sc. (IT) programme subject to meeting other eligibility criteria of the programme. The PGDCA 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, MobileApplication Development, Teaching etc. The College has a Placement Cell which assists students in placements. Students are also encouraged to do Internships even though it is not an essential part of the curriculum.

Programme Specific Outcomes (PSO) for PGDCA

At the end of the programme the students will be able to:

PSO1: Acquire problem-solving skills, especially the ability to analyze, design and implement solutions.

PSO2: Demonstrate technical skills to be employed in competitive positions in the IT sector.

PSO3: Start an Entrepreneurial venture.

PSO4: Work in different fields like content development, Multimedia, Website designing, Networking, Banking industry, Academics etc. and ability to pursue higher education and engage in independent lifelong learning.

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.

The Final selection of students is done based on the Department's Counseling sessions with the eligible applicants.

Total Number of Seats (including reserved seats): 30

Total Fees: ₹ 34165/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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	Semester I	Semester II
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.C.C1	4
2	Web Design	PGD-CA.C.C2	4
3	Data Base Management Systems	PGD-CA.C.C3	4
	Semester II		
4	Fundamentals of Computer Systems and Networks	PGD-CA.C.C4	4
5	Software Engineering	PGD-CA.C.C5	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.C.E1	4
2	E-Learning	PGD-CA.C.E2	4
3	HCI	PGD-CA.C.E3	4
4	E-commerce	PGD-CA.C.E4	4
5	Digital Marketing	PGD-CA.C.E5	4
6	Network Administration	PGD-CA.C.E6	4
7	Software Testing	PGD-CA.C.E7	4
8	Server Side Programming	PGD-CA.C.E8	4
9	Data Structures	PGD-CA.C.E9	4
10	Office Automation Tools	PGD-CA.C.E10	4
11	Assessment and Evaluation for Learning	PGD-CA.C.E11	4
12	Instructional Design	PGD-CA.C.E12	4
13	Content Management System	PGD-CA.C.E13	4
14	Web Development with FLASK	PGD-CA.C.E.14	4
15	Accounting	PGD-CA.C.E.15	4
All courses entail 03 hours of lectures and 02 hour of practical work per week.			

For additional information contact:

Dr. (Ms.) Sameena Falleiro ssf001@chowgules.ac.in OR
computerscience@chowgules.ac.in

Campus Discipline and a Conducive Environment

The College is making concerted efforts to provide relevant education of global standards in a disciplined and conducive environment. For this purpose the College follows policies pertaining to the Library, Academic Integrity and Avoidance of Plagiarism, Prevention of Sexual Harassment, Information Technology and Information Systems Security, Intellectual Property Rights. These policies are available on the college website. Students are required to abide by these policies. These policies and following regulations are some building blocks of this environment and all students are required to take note of them and follow them.

Computers Usage Rules

College encourages students to use laptops and to bring their personal laptops to the class. Students can also use the Computer Lab. Users must be fully aware of the usage rules and the IT protocol of the College. Disciplinary action will be taken against violators.

Vehicle Parking Rules

The College is not responsible for the safety of vehicles parked at the vehicle parking area of the college.

Persons must vacate the parking space after parking the vehicles. The college is also NOT responsible if the vehicle is towed away if parked in 'No Parking Area'.

Stand against Ragging

The College strictly follows the anti-ragging policy of Goa University. Whoever directly or indirectly commits, participates in, abets or instigates others to violation shall be suspended/expelled/rusticated and shall be liable to pay a fine.

Important Note

The Principal may amend the admission rules at his discretion. The Principal's decision in all matters related to admission shall be final.



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Chowgule Education Society's

Parvatibai Chowgule College of Arts and Science (Autonomous)

Accredited by NAAC with Grade 'A+'
Best Affiliated College-Goa University Silver Jubilee Year Award



PROSPECTUS OF SELF-FINANCED

Undergraduate Programmes

2023-2024

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Introduction

Parvatibai Chowgule College of Arts and Science founded in 1962 is a premier educational institution in the State of Goa, offering courses at the Graduate and Postgraduate levels as well as Ph.D. programmes. Parvatibai Chowgule College is accredited by NAAC with Grade 'A+' (CGPA of 3.27 on a 4-point scale in the 4th cycle). The College was adjudged by Goa University as the "Best Affiliated College", at the time of its Silver Jubilee celebrations in the year 2009. It was also conferred with the "Best Educational Institute" award by Business Goa in 2014.

Having been conferred with the Autonomous status by University Grants Commission in June 2014, this College became the first Autonomous college in the State of Goa. In the National Institutional Ranking Framework conducted by the Ministry of Human Resource Development (MHRD), Govt. of India for colleges across the country, our College was ranked in the Rank Band of 101-150 in the year 2018, followed subsequently by being in the Rank Band of 151-200 in the years 2019 and 2021. In 2017, the College was awarded 'DBT Star College Scheme' by Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India, being the first College in Goa to receive grants under this prestigious scheme. Our College is honoured with the 'Best Internship Partner' award by Goa Rugby Union at the Goa Rugby Awards 2018. Our College is categorized as 'Band A' institution (Rank between 06-25) in category of "Institutes and Colleges (Govt. and Govt. Aided)" in Atal Ranking of Institutions on Innovation Achievement (ARIIA) 2020 announced by MHRD, Government of India, in 2020.

Our College has also been rated at '4.5 Star' for undertaking various activities prescribed by Innovation Cell, Ministry of Education, Government of India to promote innovation and start-ups in campus during the IIC Calendar Year, 2019-20 and accordingly selected as a Mentor Institute under the Mentor-Mentee Program 2021-22 of IIC, MIC. Our College is the only college selected as Mentor Institute in the entire state of Goa.

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.

The College adopts the National Education Policy 2020 for Undergraduate Programmes in Arts and Science in the disciplines of Languages, Social Sciences, and Sciences based on the Curriculum and Credit Framework for Undergraduate Programme (CCFUP) by the University Grants Commission (UGC) from the Academic Year 2023-2024.

The NEP 2020 states, “Assessments of educational approaches in undergraduate education that integrate the humanities and Arts with Science, Technology, Engineering and Mathematics (STEM) have consistently shown positive learning outcomes, including increased creativity and innovation, critical thinking and higher-order thinking capacities, problem-solving abilities, teamwork, communication skills, more in-depth learning and mastery of curricula across fields, increases in social and moral awareness, etc., besides general engagement and enjoyment of learning”.

Further, it also recommends that “the undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a UG certificate after completing 1 year in a discipline or field including vocational and professional areas, or a UG diploma after 2 years of study, or a Bachelor’s degree after a 3-year programme. The 4-year multidisciplinary Bachelor’s programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.

However, as of now as per DHE guidelines College is offering only 3 years programme.

Since its inception, the college has always been at the forefront in educational innovation. Presently the college offers undergraduate, postgraduate, postgraduate diploma, diploma, certificate courses and Ph.D. programmes in the Arts, Science and the Vocation streams. Today, the College offers twenty-two undergraduate and six postgraduate programmes, some of these courses are unique in Goa.

The various Aided Programmes offered at the undergraduate level in the Arts Stream are: *English, French, Hindi, Konkani, Marathi, Economics, Geography, History, Philosophy, Psychology, and Sociology*. Aided Programmes in the Science Stream are: *Botany, Chemistry, Computer Science, Geography, Geology, Mathematics, Physics and Zoology*.

The various Self -Financed Programmes offered at the undergraduate level are:

1. B.Sc. in Biotechnology
2. B.Voc. in Software Development
3. B.Sc. in Biochemistry (SY & TY)

The various Self-Financed Postgraduate degree programmes offered are *M.Sc. in Analytical Chemistry, M.Sc. in Geoinformatics, M.Sc. in Information Technology, M.A. in Child Psychology and Child Development, M.A. in Geography and M.A. in English*.

The various Postgraduate diploma programmes offered are *Post Graduate Diploma in Computer Applications (PGDCA – Aided Programme)* and Self-Financed programmes are *Post Graduate*

Diploma in Geoinformatics (PGDGIS) and Post Graduate Diploma in Clinical Genetics and Medical Laboratory Techniques (PGDCGMLT).

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 Directorate of Higher Education website <https://dhe.goa.gov.in>
Complete the online admission form as per instructions provided therein.

For further details and queries:

Email: sfpadmission@chowgules.ac.in

Bachelor of Science in Biotechnology

[B.Sc.– Biotechnology]

(Self-Financed)

Programme Code: UG-BIO

Duration: Three Years (Six Semesters)

Objectives of the Programme:

The overall objectives of B.Sc. Biotechnology programme are to provide students with Core courses in Biochemistry, Microbiology, Cell and Molecular Biology, Fundamental and Molecular Genetics, Enzymology, Immunology, Plant and Animal diversity cum physiology, Human Physiology, Genetic Engineering, Tools and Techniques in Biotechnology, Industrial Biotechnology, Plant and Animal Cell culture, Biostatistics, Bioinformatics, Genomics and Proteomics, Molecular medicine, Forensic sciences, Medical Biotechnology, Pharmacology and Marine Biotechnology. Also, each course has a practical component where students gain hands-on experience of experiments based on concepts learned in theory. Online resources are made available through “Google class room.” The students are also offered with internship programme where students work with pathology laboratories, Pharma/Biopharmaceutical companies and Research institutes. In addition to regular lectures, we also organize guest lectures and alumni talk series on the latest developments in Biotechnology and possible job prospects in the field. The department endeavours to provide a theoretical backbone as we expect our students to be able to apply these concepts thereby developing analytical skills. We want students who are highly motivated to learn new concepts, comfortable in a laboratory setting and most importantly, who have a patient disposition.

Eligibility and Selection Procedure:

A student with a minimum score of 50% (CGPA of 5.3 and above in case of CBCS) at Higher Secondary School Certificate Examination level (preferably with Chemistry and Biology in the curriculum) from a recognized Board/Institute is eligible. Selection of the students for the programme will purely be based on merit due to restricted intake for the programme.

Total Number of seats (including reserved seats): 30

Total Fees for First Year (Semesters 1 and 2): ₹ 82,755/-

Total Fees for Second Year (Semesters 3 and 4): ₹ 83,225/-

Total Fees for Third Year (Semesters 5 and 6): ₹ 81,225/-

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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:

3 Years Degree: 120

Sr. No.	Component	Credits Required
		3 Years Degree
1	Component A- Major discipline (B.Sc.-Biotechnology)	60
2	Component B-Minor stream	24
3	Component C-MDC, AEC, VAC, SEC*	32
4	Component D-Internship	04
Total Credits Required		120

*MDC-Multidisciplinary Course; AEC-Ability Enhancement Course, VAC-Value Added Course, SEC-Skill Enhancement Course.

Course structure for B.Sc. in Biotechnology

SEMESTER	MAJOR DISCIPLINE CORE COURSES	INTERNSHIP	MINOR STREAM COURSES	MDC (ARTS)	AEC	VAC	SEC	NUMBER OF CREDITS
	60	4	12 (Core) +12(Voc)	9	8	6	9	120
(I)	UG-BIO-101: Biomolecules		Minor Course selection from Zoology/Botany/Chemistry	UG-BIO-MDC1: Food and Fermentation technology	01:02 CREDITS	02 VAC:04	UG-BIO-SEC1: Mushroom cultivation	20
(II)	UG-BIO-102: Basic Microbiology		Minor Course selection from Zoology/Botany/Chemistry	UG-BIO-MDC2: Basics of Biodiversity	01:04 CREDITS	01 VAC:02	UG-BIO-SEC2: Elementary tools for visualisation of biological data	20
		INTERNSHIP: 04 CREDITS (EXIT: CERTIFICATE)						
(III)	UG-BIO-201: Molecular and Cell Biology UG-BIO-202: Enzymology		Minor Course selection from Zoology/Botany/Chemistry	UG-BIO-MDC3: Composting technology	01:02 CREDITS		UG-BIO-SEC3: Biostatistics	20
(IV)	UG-BIO-204: Immunology UG-BIO-205: Molecular Genetics UG-BIO-206: Basics of Plant and Animal Sciences UG-BIO-207: Tools and Techniques in Biotechnology		Vocational Course selection from Zoology/ Botany/ Chemistry					20
		INTERNSHIP: 04 CREDITS (EXIT: DIPLOMA)						
(V)	UG-BIO-301: Concepts in Genetic Engineering UG-BIO-302: Environmental Biotechnology UG-BIO-303: Plant Biotechnology	INTERNSHIP:04	Vocational Course selection from Zoology/ Botany/ Chemistry					20
(VI)	UG-BIO-304: Industrial Biotechnology UG-BIO-305: Bioinformatics UG-BIO-306: Animal Cell culture PROJECT (from Major discipline)		Vocational Course selection from Zoology/ Botany/ Chemistry					20

Legend:

Voc: Vocational Course

AEC: Ability Enhancement Course

MDC: Multi Disciplinary Course

VAC: Value Added Course

SEC: Skill Enhancement Course

For additional information contact:

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Bachelor of Vocation in Software Development

(BVoc in SD)

(Self-Financed)

Programme Code: CSD

Duration: Three Years (Six Semesters)

Objectives of the Programme:

BVoc in Software Development is a unique program with the aim to produce individuals equipped with all the skills that are required for employability in various domains of the IT industry. The program offers a blend of skills education, professional education and general education required for all round development of the individual in the field of software development. It is a three years degree program with exit options at the first year with diploma certificate, second year with advanced diploma certificate and BVoc degree at the completion of three years.

Total Number of Seats (including reserved seats): 30

A student from Vocational/Arts/Science/Commerce Stream at Higher Secondary School Certificate Examination level from a recognized Board/Institute is eligible. Selection of the students for the programme will purely be based on merit due to restricted intake for the programme.

***Total Fees for First Year (Semesters 1 and 2) : ₹ 77,255/-**

***Total Fees for Second Year (Semesters 3 and 4) : ₹ 71,225/-**

*** Total Fees for Third Year (Semesters 5 and 6) : ₹ 63,725/-**

***NOTE: University Registration fee for Students from Other than Goa University (NRI/ICCR/Foreign University): ₹ 3860/-**

*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 B.Voc. in Software Development programme: 180

Sr. No.	Nature of Courses	Credits Required
1	Skill Development Courses (18 credits per semester)	108
2	General Courses (12 credits per semester)	72
	Total Credits Required	180

Course Structure of B.Voc in Software Development - Component A

NSQF level/ Semester	Course Code	Course Title	Component	Course Credit
Skill Development Qualification Pack - Junior Software Developer(SSC/Q0508)				
Level 4 / Semester 1	General Education Component			
	SD – G8	Environmental Studies	Theory	4
	SD – G9	Business Communication	Theory	4
	SD – G10	Accounting for non accountant	Theory	4
	Skill Component			
	CSD-SK3	Introduction to programming	Theory & Practicals	6
	CSD-SK7	Database Management System	Theory & Practicals	6
	CSD-SK5	Content Management System	Theory & Practicals	6
	Total Credits for Semester			30
Skill Development Qualification Pack - Web Developer (SSC/Q0503)				
Level 5 / Semester II	General Education Component			
	SD – G6	Academic Writing	Theory	4
	SD – G1	Language Paper - I	Theory	4
	SD – G11	Entrepreneurship	Theory	4
	Skill Component			
	CSD-SK1	Computer organisation and operating System	Theory & Practicals	6
	CSD-SK2	Web Designing	Theory & Practicals	6
	CSD-SK6	Multimedia	Theory & Practicals	6
	Total Credits for Semester			30
Skill Development Qualification Pack - Application Developer - Web & Mobile (SSC/Q8403)				
Level 6 / Semester III	General Education Component			
	SD-G20	Reasoning technique	Theory	4
	SD-G21	Mathematical foundation of Computer Science	Theory	2
	SD-G13	Personality Development	Theory	4
		Internship	OJT	2

	Skill Component				
	CSD-SK7	Object oriented programming	Theory & Practicals	6	
	CSD-SK9	Server Side programming	Theory & Practicals	6	
	CSD-SK8	Computer networks	Theory & Practicals	6	
	Total Credits for Semester			30	
Skill Development Qualification Pack - Application Developer - Web & Mobile (SSC/Q8403)					
	General Education Component				
Level 6 / Semester IV	SD-G17	E-Commerce	Theory	4	
	SD-G22	Creative Thinking	Theory	2	
	SD-G23	Advance Quantitative Technique	Theory	4	
		Internship	OJT	2	
	Skill Component				
	CSD-SK10	Web Development Framework	Theory & Practicals	6	
	CSD-SK11	Software Engineering	Theory & Practicals	6	
	CSD-SK12	Mobile Application Development	Theory & Practicals	6	
		Total Credits for Semester			30
Skill Development Qualification Pack - Application Architect - Web & Mobile (SSC/Q8402)					
	General Education Component				
Level 7 / Semester V	SD-G14	Digital Marketing	Theory	4	
	SD-G15	Organisational Behaviour	Theory	4	
	SD-G16	Maths for Competitive Exams	Theory	4	
	Skill Component				
	CSD-SK14	Software Testing	Theory & Practicals	6	
	CSD-SK13	Data Structures	Theory & Practicals	6	
		Project		6	
		Total Credits for Semester			30

Skill Development Qualification Pack - Application Architect - Web & Mobile (SSC/Q8402)				
Level 7 / Semester VI	General Education Component			
	SD-G19	Human Computer Interface	Theory	4
	SD-G18	Independent Studies	Theory	4
	SD-G17	E-Commerce	Theory	4
	Skill Component			
	CSD-SK15	Network Security	Theory & Practicals	6
	CSD-SK16	Cloud Computing	Theory & Practicals	6
		Project		6
	Total Credits for Semester			30

For additional information contact:
Mr. Mitendra Alve mda000@chowgules.ac.in

Campus Discipline and a Conducive Environment

The College is making concerted efforts to provide relevant education of global standards in a disciplined and conducive environment. For this purpose the college follows policies pertaining to the Library, Academic Integrity and avoidance of Plagiarism, Prevention of Sexual Harassment, Information Technology and Information Systems Security, Intellectual Property Rights. These policies are available on the college website. Students are required to abide by these policies. These policies and following regulations are some building blocks of this environment and all students are required to take note of them and follow them.

Computers Usage Rules

College encourages students to use laptops and to bring their personal laptops to the class. Students can also use the Computer Lab. Users must be fully aware of the usage rules and the IT protocol of the College. Disciplinary action will be taken against violators.

Vehicle Parking Rules

The College is not responsible for the safety of vehicles parked at the vehicle parking area of the college.

Persons must vacate the parking space after parking the vehicles. The college is also NOT responsible if the vehicle is towed away if parked in 'No Parking Area'.

Stand against Ragging

The college strictly follows the anti-ragging policy of Goa University. Whoever directly or indirectly commits, participates in, abets or instigates others to violation shall be suspended/expelled/rusticated and shall be liable to pay a fine.

Important Note

The Principal may amend the admission rules at his discretion. The Principal's decision in all matters related to admission shall be final.



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