



# 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  
2022-2023

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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, 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 Child Psychology and Child Development
2. Master of Arts in Geography
3. Master of Arts in English
4. Master of Arts in Hindi
5. Master of Science in Analytical Chemistry
6. Master of Science in Geoinformatics
7. 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 64 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](mailto:sfpadmission@chowgules.ac.in)

# Postgraduate Degree Programmes

**2022 -2023**

# **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 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. 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): ₹ 75152/-**

**Total Fees for Part II (Semesters 3 and 4): ₹ 75152/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64**

| Sr. No. | Nature of Courses  | Credits Required |
|---------|--------------------|------------------|
| 1       | Core - Theory      | 16               |
| 2       | Core - Skill based | 16               |
| 3       | Elective           | 32               |
|         | <b>TOTAL</b>       | <b>64</b>        |

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

| PGM-PSY         | Odd Semester                             | Even Semester                             |
|-----------------|--|---|
| <b>Part One</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                 | Core (Theory) Course Credits - 04        | Core (Theory) Course Credits - 04         |
|                 | Core (Skill-based) Course Credits - 04   | Core (Skill-based) Course Credits - 04    |
|                 | Elective Course Credits - 08             | Elective Course Credits - 08              |
|                 | <b>Total First Semester Credits =16</b>  | <b>Total Second Semester Credits = 16</b> |
| <b>Part Two</b> | <b>Third Semester</b>                    | <b>Fourth Semester</b>                    |
|                 | Core (Theory) Course Credits - 04        | Core (Theory) Course Credits - 04         |
|                 | Core (Skill-based) Course Credits - 04   | Core (Skill-based) Course Credits - 04    |
|                 | Elective Course Credits - 08             | Elective Course Credits - 08              |
|                 | <b>Total Third Semester Credits = 16</b> | <b>Total Fourth Semester Credits = 16</b> |

**Course Information (a)**

| Sr. No. | Course Titles              | Course Code  | Course Credits |
|---------|----------------------------|--------------|----------------|
|         | <b>CORE COURSES</b>        |              |                |
|         | <b>Semester I</b>          |              |                |
| 1       | Child Development (Theory) | PGM-PSY-C1   | 04             |
| 2       | Practicum (Skill-Based)    | PGM-PSY-S-C2 | 04             |

### Course Information (a) Continued

| Sr. No.             | Course Titles  | Course Code  | Course Credits |
|---------------------|--|--------------|----------------|
| <b>CORE COURSES</b> |  |              |                |
| <b>Semester II</b>  |  |              |                |
| 3                   | Child Psychopathology                                      | PGM-PSY-C3   | 04             |
| 4                   | Counseling Therapies for Children I (Skill Based)          | PGM-PSY-S-C4 | 04             |
| <b>Semester III</b> |  |              |                |
| 5                   | Counseling Approaches                                      | PGM-PSY-C5   | 04             |
| 6                   | Counseling Therapies for Children II (Skill Based)         | PGM-PSY-S-C6 | 04             |
| <b>Semester IV</b>  |  |              |                |
| 7                   | Children with Disabilities and Understanding Special Needs | PGM-PSY-C7   | 04             |
| 8                   | Management of Learning Disabilities                        | PGM-PSY-S-C8 | 04             |

### Course Information (b)

| Sr. No.                 | Course Titles                         | Semester | Course Code   | Course Credits |
|-------------------------|---------------------------------------|----------|---------------|----------------|
| <b>ELECTIVE COURSES</b> |                                       |          |               |                |
| 1                       | Research Methodology in Psychology-I  | I        | PGM-PSY-I-E1  | 04             |
| 2                       | School Counselling                    | I        | PGM-PSY-I-E2  | 04             |
| 3                       | Theories of personality               | I        | PGM-PSY-I-E3  | 04             |
| 4                       | Research Methodology in Psychology-II | II       | PGM-PSY-I-E4  | 04             |
| 5                       | Child & Crime                         | II       | PGM-PSY-I-E5  | 04             |
| 6                       | Psychology of Adolescence             | II       | PGM-PSY-I-E6  | 04             |
| 7                       | Advanced Statistics in Psychology     | III      | PGM-PSY-I-E7  | 04             |
| 8                       | NGO Management                        | III      | PGM-PSY-I-E8  | 04             |
| 9                       | Paediatric Psychology                 | III      | PGM-PSY-I-E9  | 04             |
| 10                      | Research Writing                      | IV       | PGM-PSY-I-E10 | 04             |
| 11                      | Rehabilitation Psychology             | IV       | PGM-PSY-I-E11 | 04             |
| 12                      | Counselling Parents                   | IV       | PGM-PSY-I-E12 | 04             |

For additional information contact:

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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): 20**

**Total Fees for Part I (Semesters 1 and 2): ₹ 60093/-**

**Total Fees for Part II (Semesters 3 and 4): ₹ 57380/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64

| Sr. No. | Nature of Courses      | Credits Required |
|---------|------------------------|------------------|
| 1       | Core Courses           | 32               |
| 2       | Elective Courses       | 32               |
|         | Total Credits Required | 64               |

### Course Structure of M.A. in Geography

| PGM-GEG         | Odd Semester                             | Even Semester                             |
|-----------------|--|---|
| <b>Part One</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                 | Core Course Credits – 08                 | Core Course Credits – 08                  |
|                 | Elective Courses Credits - 08            | Elective Courses Credits - 08             |
|                 | <b>Total First Semester Credits = 16</b> | <b>Total Second Semester Credits = 16</b> |
| <b>Part Two</b> | <b>Third Semester</b>                    | <b>Fourth Semester</b>                    |
|                 | Core Course Credits - 08                 | Core Course Credits - 08                  |
|                 | Elective Courses Credits - 08            | Elective Courses Credits - 08             |
|                 | <b>Total Third Semester Credits = 16</b> | <b>Total Fourth Semester Credits = 16</b> |

### Course Information (a)

| Sr. No. | Course Titles                         | Course Code | Course Credits |
|---------|---------------------------------------|-------------|----------------|
|         | <b>CORE COURSES</b>                   |             |                |
|         | <b>Semester I</b>                     |             |                |
| 1       | Advanced Geomorphology                | PGM-GEG.C1  | 4              |
| 2       | Advanced Climatology                  | PGM-GEG.C2  | 4              |
|         | <b>Semester II</b>                    |             |                |
| 3       | Geography of Population               | PGM-GEG.C3  | 4              |
| 4       | Advanced Economic Geography           | PGM-GEG.C4  | 4              |
|         | <b>Semester III</b>                   |             |                |
| 5       | Statistical Techniques in Geography   | PGM-GEG.C5  | 4              |
| 6       | Fundamentals of Remote Sensing        | PGM-GEG.C6  | 2              |
| 7       | Practical's in Remote Sensing         | PGM-GEG.C7  | 2              |
|         | <b>Semester IV</b>                    |             |                |
| 8       | Regional planning and development     | PGM-GEG.C8  | 4              |
| 9       | Fundamentals of Geoinformatics System | PGM-GEG.C9  | 2              |
| 10      | Practical's in Geoinformatics System  | PGM-GEG.C10 | 2              |

### Course Information (b)

| Sr. No.                 | Core Titles                           | Course Code      | Course |
|-------------------------|---------------------------------------|------------------|--------|
| <b>ELECTIVE COURSES</b> |                                       |                  |        |
| 1                       | Basics of Coastal Geomorphology       | PGM-GEG.E1       | 2      |
| 2                       | Teaching Techniques in Geography      | PGM-GEG.E2       | 2      |
| 3                       | Techniques of Academic Report Writing | PGM-GEG.E3       | 2      |
| 4                       | Geography of Environment              | PGM-GEG.E4       | 2      |
| 5                       | Geography and Tourism                 | PGM-GEG.E5       | 2      |
| 6                       | Field Techniques                      | PGM-GEG.E6       | 2      |
| 7                       | Regional Geography of India           | PGM-GEG.E7       | 2      |
| 8                       | Soil geography                        | PGM-GEG.E8       | 2      |
| 9                       | Watershed Management                  | PGM-GEG.E11(New) | 2      |
| 10                      | Geographical Thought                  | PGM-GEG.E10      | 2      |
| 11                      | Basics of Research Methodology        | PGM-GEG.E11      | 2      |
| 12                      | Map Interpretation & Cartography      | PGM-GEG.E12      | 2      |
| 13                      | Geography and Development Models      | PGM-GEG.E13      | 2      |
| 14                      | Digital Image Processing              | PGM-GEG.E14      | 2      |
| 15                      | Tourism Planning and Development      | PGM-GEG.E15      | 2      |
| 16                      | Urban Settlements                     | PGM-GEG.E16      | 2      |
| 17                      | Advance Coastal Geomorphology         | PGM-GEG.E17      | 2      |
| 18                      | Dissertation                          | PGM-GEG.E18      | 4      |

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 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 Lit Day, Gaia – World Lit Day, and even Cosplay events such as - Mythos.

## **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 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 through a change of faculty exam conducted by the department prior to admission (provided there are seats available).

## **Total Number of Seats (including reserved seats): 25**

For additional information contact:

Mr. Andrew S Barreto [asb002@chowgules.ac.in](mailto:asb002@chowgules.ac.in)

**Total Fees for Part I (Semesters 1 and 2): □ 73498/-**

**Total Fees for Part II (Semesters 3 and 4): □ 70608/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64**

| Sr. No.  | Nature of Courses         | Credits Required |
|--|---------------------------|------------------|
| 1  | Core Courses              | 32               |
| 2  | Elective Courses          | 32               |
| 3  | Bridge Courses (Optional) | 4*               |
|  | Total Credits Required    | 64               |
| *4 Credits obtained from Bridge Courses are not considered for determining the CGPA. |                           |                  |

## Course Structure - M.A. in English

| <b>PGM-ENG</b>  | <b>Odd Semester</b>                         | <b>Even Semester</b>                         |
|-----------------|---|--|
| <b>Part One</b> | <b>First Semester</b>                       | <b>Second Semester</b>                       |
|                 | Core Courses Credits - 08                   | Core Courses Credits - 08                    |
|                 | Elective Courses Credits - 08               | Elective Courses Credits - 08                |
|                 | Bridge Course Credits - 02                  | Bridge Course Credits - 02                   |
|                 | <b>Total First Semester Credits = 16+02</b> | <b>Total Second Semester Credits = 16+02</b> |
|                 |   |  |
| <b>Part Two</b> | <b>Third Semester</b>                       | <b>Fourth Semester</b>                       |
|                 | Core Courses Credits - 08                   | Core Courses Credits - 08                    |
|                 | Elective Courses Credits - 08               | Elective Courses Credits - 08                |
|                 | <b>Total Third Semester Credits = 16</b>    | <b>Total Fourth Semester Credits = 16</b>    |

## Course Information (a)

|   | <b>CORE COMPULSORY</b>   | <b>CORE ELECTIVES</b>                        |  | <b>CORE COMPULSORY</b>                                  | <b>CORE ELECTIVES</b>                        |
|---|--|--|--|---|--|
| <b>SEMESTER I</b>   | <b>PGM-ENG-C1</b><br>English Poetry  | TWO Electives Chosen From Core Elective list | <b>SEMESTER III</b>  | <b>PGM-ENG-C4</b><br>Linguistics                        | TWO Electives Chosen From Core Elective list |
|   | <b>PGM-ENG-C3</b><br>Exploring Narratives in Fiction                             |  |  | <b>PGM-ENG-C7</b><br>Post-Colonial: Theory And Practice |  |
|   | <b>BRIDGE COURSE (OPTIONAL)</b><br><br><b>PGM-ENG-B1</b><br>Engaging Literature  |  |  |   |  |
| <b>SEMESTER II</b>  | <b>PGM-ENG-C2</b><br>Twentieth Century English Drama                             | TWO Electives Chosen From Core Elective list | <b>SEMESTER IV</b>   | <b>PGM-ENG-C8</b><br>Asian Literature                   | TWO Electives Chosen From Core Elective list |
|   | <b>PGM-ENG-C5</b><br>Literary Theory   |  |  | <b>PGM-ENG-C10</b><br>World Literature                  |  |
|   | <b>BRIDGE COURSE (OPTIONAL)</b><br><br><b>PGM-ENG-B2</b><br>Research Methodology |  |  |   |  |
| Students will choose TWO electives from the following pool of electives as offered for each semesters by the department in the academic year. |  |  |  |   |  |
| <b>CORE ELECTIVES</b>   |  |  |  |   |  |
| <b>PGM-ENG-E1</b><br>Technical and Media Writing  |  |  | <b>PGM-ENG-E10</b><br>Film Studies   |   |  |
| <b>PGM-ENG-E2</b><br>Green Studies  |  |  | <b>PGM-ENG-E11</b><br>Prose Writings   |   |  |
| <b>PGM-ENG-E3</b><br>Visual Literature- Perspectives  |  |  | <b>PGM-ENG-E12</b><br>Women's Literature                                     |   |  |
| <b>PGM-ENG-E4</b><br>Creative Writing   |  |  | <b>PGM-ENG-E13</b><br>Children's Literature                                  |   |  |
| <b>PGM-ENG-E5</b><br>Mythology, Archetype & Literature  |  |  | <b>PGM-ENG-E14</b><br>World Subaltern: Aboriginal Narratives                 |   |  |
| <b>PGM-ENG-E6</b><br>Indian Literature in Translation   |  |  | <b>PGM-ENG-E15</b><br>Gender & Sexuality                                     |   |  |
| <b>PGM-ENG-E7</b><br>Shakespeare  |  |  | <b>PGM-ENG-E16</b><br>The Indian Subaltern: Dalit and Transgender Narratives |   |  |
| <b>PGM-ENG-E8</b><br>Popular Literature   |  |  | <b>PGM-ENG-E17</b><br>Modern European Literature                             |   |  |
| <b>PGM-ENG-E-9</b><br>ELLT<br>(English Language and Literature Teaching)  |  |  | <b>DISSERTATION (OPTIONAL)</b>   |   |  |

\*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.

# **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 the 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 scored 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):  54116/-**

**Total Fees for Part II (Semesters 3 and 4):  53938/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64**

| Sr. No. | Nature of Courses | Credits Required |
|---------|-------------------|------------------|
| 1       | Core Courses      | 32               |
| 2       | Elective Courses  | 32               |
|         | Total Credits     | 64               |

**Course Structure - M.A. in Hindi**

| PGM-HIN         | Odd Semester                             | Even Semester                             |
|-----------------|--|---|
| <b>Part One</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                 | Core Course Credits –08                  | Core Course Credits – 08                  |
|                 | Elective Courses Credits - 08            | Elective Courses Credits - 08             |
|                 | <b>Total First Semester Credits = 16</b> | <b>Total Second Semester Credits = 16</b> |
| <b>Part Two</b> | <b>Third Semester</b>                    | <b>Fourth Semester</b>                    |
|                 | Core Course Credits – 08                 | Core Course Credits – 08                  |
|                 | Elective Courses Credits –08             | Elective Courses Credits –08              |
|                 | <b>Total Third Semester Credits = 16</b> | <b>Total Fourth Semester Credits = 16</b> |

**Course Information (a)**

| Sr. No. | Course Titles   | Course Code | Course Credits |
|---------|---|-------------|----------------|
|         | <b>CORE COURSES</b>                                       |             |                |
| 1       | Hindi Sahitya Ka Itihas (Aadikal, Bhaktikal Evam Ritikal) | PGM-HIN-C-1 | 4              |
| 2       | Prachin Evam Madhyakalin Kavya                            | PGM-HIN-C-2 | 4              |
| 3       | Hindi Sahitya Ka Itihas: Adhunik Kal                      | PGM-HIN-C-3 | 4              |
| 4       | Adhunik Kavya   | PGM-HIN-C-4 | 4              |
| 5       | Bharatiya Kavyashastra                                    | PGM-HIN-C-5 | 4              |
| 6       | Natak Evam Rangmanch                                      | PGM-HIN-C-6 | 4              |
| 7       | Pashchatya Kavyashastra                                   | PGM-HIN-C-7 | 4              |
| 8       | Adhunik Gadya (Natak, Upanyas, Nibandh, Kahani)           | PGM-HIN-C-8 | 4              |

### Course Information (b)

| Sr. No. | Course Titles   | Course Code  | Course Credits |
|---------|---|--------------|----------------|
|         | <b>ELECTIVE COURSES</b>                                     |              |                |
| 1       | Bhasha Vigyan   | PGM-HIN-E-1  | 4              |
| 2       | Vishesh Rachanakar: Sachchidanand Hiranand Vatsayan 'Agyey' | PGM-HIN-E-2  | 4              |
| 3       | Dalit Vimarsh   | PGM-HIN-E-3  | 4              |
| 4       | Anuvad  | PGM-HIN-E-4  | 4              |
| 5       | Vishesh Vidha: Upanyas                                      | PGM-HIN-E-5  | 4              |
| 6       | Vishesh Vidha: Kahani                                       | PGM-HIN-E-6  | 4              |
| 7       | Aalochak Aur Aalochana                                      | PGM-HIN-E-7  | 4              |
| 8       | Patrakarita Evam Jansanchar Madhyam                         | PGM-HIN-E-8  |                |
| 9       | Bharatiya Sahitya   | PGM-HIN-E-9  | 4              |
| 10      | Prayojanmulak Hindi   | PGM-HIN-E-10 | 4              |
| 11      | Aadhunik Hindi Sahitya Ki Vaicharik Prushtbhumii            | PGM-HIN-E-11 | 4              |
| 12      | Hindi Bhasha, Lipi, Vyakran Evam Sarvekshan                 | PGM-HIN-E-12 | 4              |
| 13      | Media Lekhan  | PGM-HIN-E-13 |                |
| 14      | Stree Vimarsha  | PGM-HIN-E-14 | 4              |
| 15      | Gadhya Ki Anya Vidhaein                                     | PGM-HIN-E-15 | 4              |
| 16      | Shodh Pravidhi  | PGM-HIN-E-16 | 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 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):  109330/-**

**Total Fees for Part II (Semesters 3 and 4):  108550/-**

\*Note: Fees for the Academic Year 2022-23 are **Subject to Change**

‡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: 64**

| S. No. | Nature of Courses                       | Credits Required |
|--------|---|------------------|
| 1      | Core (General) Courses                  | 20               |
| 2      | Core (Analytical Chemistry) Courses     | 12               |
| 3      | Elective (General) Courses              | 12               |
| 4      | Elective (Analytical Chemistry) Courses | 20               |
|        | Total Credits                           | 64               |

**Course Structure M.Sc. in Analytical Chemistry**

| PGM-CHE         | Odd Semester   | Even Semester  |
|-----------------|--|--|
| <b>Part One</b> | <b>First Semester</b>                                | <b>Second Semester</b>                               |
|                 | Core Course Credits - 10                             | Core Course Credits - 10                             |
|                 | Elective Courses Credits - 06                        | Elective Courses Credits - 06                        |
|                 | <b>Total First Semester Credits = 16</b>             | <b>Total Second Semester Credits = 16</b>            |
| <b>Part Two</b> | <b>Third Semester</b>                                | <b>Fourth Semester</b>                               |
|                 | Core Course Credits (Analytical Chemistry) - 09      | Core Course Credits (Analytical Chemistry) - 03      |
|                 | Elective Courses Credits (Analytical Chemistry) - 06 | Elective Courses Credits (Analytical Chemistry) - 14 |
|                 | <b>Total Third Semester Credits = 15</b>             | <b>Total Fourth Semester Credits = 17</b>            |

### Course Information (a)

| S. No.  | Course Title                              | Course Code     | Course Credits |
|---|---|-----------------|----------------|
| <b>CORE COURSES (SEMESTER I AND II)</b>                           |   |                 |                |
| 1   | Spectroscopy in Chemistry                 | PGM-CHE-AC-C401 | 3              |
| 2   | Laboratory Course in Analytical Chemistry | PGM-CHE-AC-C402 | 2              |
| 3   | General Inorganic Chemistry               | PGM-CHE-IC-C401 | 3              |
| 4   | Laboratory Course in Inorganic Chemistry  | PGM-CHE-IC-C402 | 2              |
| 5   | General Organic Chemistry                 | PGM-CHE-OC-C401 | 3              |
| 6   | Laboratory Course in Organic Chemistry    | PGM-CHE-OC-C402 | 2              |
| 7   | General Physical Chemistry                | PGM-CHE-PC-C401 | 3              |
| 8   | Laboratory Course in Physical Chemistry   | PGM-CHE-PC-C402 | 2              |
| <b>CORE COURSES (ANALYTICAL CHEMISTRY) (SEMESTER III AND IV )</b> |   |                 |                |
| 1   | Fundamentals of Titrimetric Analysis      | PGM-CHE-AC-C501 | 3              |
| 2   | Separation Techniques                     | PGM-CHE-AC-C502 | 3              |
| 3   | Spectral Methods of Analysis              | PGM-CHE-AC-C503 | 3              |
| 4   | Experiments In Analytical Chemistry       | PGM-CHE-AC-C504 | 3              |

### Course Information (b)

| S. No.   | Course Title   | Course Code     | Course Credit |
|--|--|-----------------|---------------|
| <b>ELECTIVE COURSES (SEMESTER I AND II)</b>                          |  |                 |               |
| 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             |
| 10   | Physical organic Chemistry , Pericyclic and Photochemical reaction | PGC-CHE-OO-E403 | 2             |
| <b>ELECTIVE COURSES (ANALYTICAL CHEMISTRY) (SEMESTER III AND IV)</b> |  |                 |               |
| 11   | Quality Assurance and Quality Control in Analytical Chemistry      | PGM-CHE-AO-E509 | 2             |
| 12   | Bio analytical Chemistry   | PGM-CHE-AO-E504 | 2             |
| 13   | Calibrations and Validation  | PGM-CHE-AO-E505 | 2             |
| 14   | Advanced Mass Spectrometry   | PGM-CHE-AO-E501 | 2             |
| 15   | Applied Analytical Chemistry                                       | PGM-CHE-AO-E503 | 2             |
| 16   | Advanced NMR Spectroscopy  | PGM-CHE-AO-E502 | 2             |
| 17   | Chemo metrics  | PGM-CHE-AO-E506 | 2             |
| 18   | Dissertation   | PGM-CHE-AO-D510 | 8             |
| 19   | Modules in Experimental Chemistry                                  | PGM-CHE-AO-M511 | 4             |
| 20   | Internship Module  | PGM-CHE-AO-I512 | 4             |
| 21   | Techniques in Chemical Analysis                                    | PGM-CHE-AO-E507 | 2             |
| 22   | Thermal Methods of Analysis  | PGM-CHE-AC-E508 | 2             |

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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 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): ₹ 62595/-**

**Total Fees for Part II (Semesters 3 and 4): ₹ 61798/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64

| Sr. No. | Nature of Courses      | Credits Required |
|---------|------------------------|------------------|
| 1       | Core Courses           | 32               |
| 2       | Elective Courses       | 32               |
|         | Total Credits Required | 64               |

### Course Structure - M.Sc. in Geoinformatics

| PGM-GIS         | Odd Semester                             | Even Semester                             |
|-----------------|--|---|
| <b>Part One</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                 | Core Course Credits - 08                 | Core Course Credits – 08                  |
|                 | Elective Courses Credits - 08            | Elective Courses Credits – 08             |
|                 | <b>Total First Semester Credits = 16</b> | <b>Total Second Semester Credits = 16</b> |
| <b>Part Two</b> | <b>Third Semester</b>                    | <b>Fourth Semester</b>                    |
|                 | Core Course Credits - 04                 | Core Course- Credits - 16                 |
|                 | Elective Courses Credits - 12            |   |
|                 | <b>Total Third Semester Credits = 16</b> | <b>Total Fourth Semester Credits = 16</b> |

### Course Information (a)

| Sr. No.  | Course Title                                       | Course Code | Course Credits |
|--|--|-------------|----------------|
| <b>CORE COURSES</b>  |  |             |                |
| <b>SEMESTER I</b>  |  |             |                |
| 1  | Basics of GIS and GPS                              | PGM-GIS-C1  | 4              |
| 2  | Basics of RS and Photogrammetry                    | PGM-GIS-C2  | 4              |
| <b>SEMESTER II</b>   |  |             |                |
| 3  | Spatial Analysis & Modelling                       | PGM-GIS-C3  | 4              |
| 4  | Advanced Remote Sensing and GIS                    | PGM-GIS-C4  | 4              |
| <b>SEMESTER III</b>  |  |             |                |
| 5  | Applications of GIS in Urban and Regional Planning | PGM-GIS-C5  | 4              |
| <b>SEMESTER IV</b>   |  |             |                |
| 6  | Project Work                                       | PGM-GIS-C6  | 16             |
| Each course assigns 02 credits for Theory and 02 credits for Practical work. |  |             |                |

### Course Information (b)

| Sr. No.  | Course Title                                | Course Code | Course Credits |
|--|---|-------------|----------------|
| <b>ELECTIVE COURSES</b>  |   |             |                |
| 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  | 4              |
| 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. |   |             |                |

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Dr. Anil Yedage [asy002@chowgules.ac.in](mailto:asy002@chowgules.ac.in)

# **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 Operating Systems and Networks, Data Mining, Design & Analysis of Algorithms etc. The elective courses include Advanced Database Management Systems, Natural Language Processing, Software Testing, Information Retrieval, Mobile Computing 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 internship. The department placement team and well connected alumni network facilitate students appearing in 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 are names of some companies worth mentioning where our students did their internships from and continue to work.

## **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): ₹ 115947/-**

**Total Fees for Part II (Semesters 3 and 4): ₹ 115947/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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: 64**

| <b>Sr. No.</b> | <b>Nature of Courses</b>         | <b>Credits Require</b> |
|----------------|----------------------------------|------------------------|
| 1              | Core Theory Courses              | 22                     |
| 2              | Core Laboratory Courses          | 10                     |
| 3              | Elective Courses                 | 24                     |
| 4              | Elective Project or Dissertation | 08                     |
|                | <b>Total Credits Required</b>    | <b>64</b>              |

### **Course Structure - M.Sc. in Information Technology**

| <b>PGM-IT</b>   | <b>Odd Semester</b>                      | <b>Even Semester</b>                                   |
|-----------------|--|--|
| <b>Part One</b> | <b>First Semester</b>                    | <b>Second Semester</b>                                 |
|                 | Core Theory Courses Credits - 08         | Core Theory Courses Credits - 10                       |
|                 | Core Laboratory Courses Credits - 04     | Core Laboratory Courses Credits - 4                    |
|                 | Elective Courses Credits - 8             | Elective Courses Credits - 08 Credits                  |
|                 | <b>Total First Semester Credits = 20</b> | <b>Total Second Semester Credits = 22</b>              |
| <b>Part Two</b> | <b>Third Semester</b>                    | <b>Fourth Semester</b>                                 |
|                 | Core Theory Courses Credits - 04         | Elective Course Credits (Project or Dissertation) - 08 |
|                 | Core Laboratory Courses Credits - 02     |  |
|                 | Elective Courses Credits - 08            |  |
|                 | <b>Total Third Semester Credits = 14</b> | <b>Total Fourth Semester Credits = 08</b>              |

### Course Information (a)

| Sr. No              | Course Titles   | Course Code | Course Credits |
|---------------------|---|-------------|----------------|
| <b>CORE COURSES</b> |   |             |                |
| <b>Semester I</b>   |   |             |                |
| 1                   | Data Structures and Algorithms                            | PGM-IT-C1   | 4              |
| 2                   | Operating Systems and Networks                            | PGM-IT-C2   | 4              |
| 3                   | Data Structures and Algorithms Lab                        | PGM-IT-C3   | 2              |
| 4                   | Operating Systems and Networks Lab                        | PGM-IT-C4   | 2              |
| <b>Semester II</b>  |   |             |                |
| 5                   | Software Architecture, Design Patterns and Frameworks     | PGM-IT-C5   | 4              |
| 6                   | Design and Analysis of Algorithms                         | PGM-IT-C6   | 4              |
| 7                   | Statistical Computing                                     | PGM-IT-C7   | 2              |
| 8                   | Software Architecture, Design Patterns and Frameworks Lab | PGM-IT-C8   | 2              |
| 9                   | Design and Analysis of Algorithms Lab                     | PGM-IT-C9   | 2              |
| <b>Semester III</b> |   |             |                |
| 10                  | Information Retrieval                                     | PGM-IT-C10  | 4              |
| 11                  | Information Retrieval Lab                                 | PGM-IT-C11  | 2              |

### Course Information (b)

| Sr. No.                 | Course Titles                            | Course Code | Course Credits |
|-------------------------|--|-------------|----------------|
| <b>ELECTIVE COURSES</b> |  |             |                |
| 1                       | Computer Graphics                        | PGM-IT-E1   | 4              |
| 2                       | Mobile Computing                         | PGM-IT-E2   | 4              |
| 3                       | Cloud Computing                          | PGM-IT-E3   | 4              |
| 4                       | Seminar                                  | PGM-IT-E4   | 2              |
| 5                       | Advanced Database Management Systems     | PGM-IT-E5   | 4              |
| 6                       | Advanced Database Management Systems Lab | PGM-IT-E6   | 2              |
| 7                       | Natural Language Processing              | PGM-IT-E7   | 4              |
| 8                       | Natural Language Processing Lab          | PGM-IT-E8   | 2              |
| 9                       | Data Mining                              | PGM-IT-E9   | 4              |
| 10                      | Machine Learning                         | PGM-IT-E10  | 4              |
| 11                      | Software Metrics & Project Management    | PGM-IT-E11  | 4              |
| 12                      | Compiler Design                          | PGM-IT-E12  | 4              |
| 13                      | Software Testing                         | PGM-IT-E13  | 4              |
| 14                      | Communication Skills Course              | PGM-IT-E14  | 4              |
| 15                      | Applied Probability and Statistics       | PGM-IT-E15  | 4              |
| 16                      | Middleware Technology                    | PGM-IT-E16  | 4              |
| 17                      | Educational Technology                   | PGM-IT-E17  | 2              |
| 18                      | Network Security                         | PGM-IT-E18  | 4              |
| 19                      | Image Processing                         | PGM-IT-E19  | 4              |
| 20                      | Project (Semester 4)                     | PGM-IT-E20  | 8              |
| 21                      | Dissertation (Semester 4)                | PGM-IT-E21  | 8              |

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Postgraduate Diploma Programmes  
2022 - 2023

# **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 the 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: ₹ 80667/-**

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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                             |
|--|--|---|
| <b>Courses</b>   | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|  | Core Courses Credits - 12                | Core Courses Credits - 08                 |
|  | Elective Courses Credits - 08            | Elective Courses Credits - 12             |
|  | <b>Total First Semester Credits = 40</b> | <b>Total Second Semester Credits = 40</b> |
| Students need to complete <b>Internship/Hands on training involving 08 credits</b> on completion of Second Semester. |  |   |

### Course Information

| Sr. No.   | Course Title  | Course Code  | Course Credits |
|---|---|--------------|----------------|
|   | <b>SEMESTER I</b>   |              |                |
|   | <b>Core Courses</b>   |              |                |
| 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              |
|   | <b>Elective Courses</b>   |              |                |
| 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              |
|   | <b>Semester II</b>  |              | 4              |
|   | <b>Core Courses</b>   |              |                |
| 7   | Clinical Genetic Techniques II  | PGD-CGMLT-C4 | 4              |
| 8   | Clinical Biochemistry II  | PGD-CGMLT-C5 | 4              |
|   | <b>Elective Courses</b>   |              |                |
| 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:** ₹ 60328/-

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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                             |
|----------------|--|---|
| <b>Courses</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                | Core Courses - Credits 12                | Core Courses - Credits 08                 |
|                | Elective Courses -Credits 08             | Elective Courses -Credits 12              |
|                | <b>Total First Semester Credits = 20</b> | <b>Total Second Semester Credits = 20</b> |

#### Course Information (a)

| Sr. No.             | Course Title                    | Course Code | Course Credits |
|---------------------|---------------------------------|-------------|----------------|
| <b>CORE COURSES</b> |                                 |             |                |
| <b>Semester I</b>   |                                 |             |                |
| 1                   | Basics of GIS and GPS           | PGD-GIS-C1  | 4              |
| 2                   | Geostatistics                   | PGD-GIS-C2  | 4              |
| 3                   | Basic of RS and Photogrammetry  | PGD-GIS-C3  | 4              |
| <b>Semester II</b>  |                                 |             |                |
| 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 |
|-------------------------|--|-------------|----------------|
| <b>ELECTIVE COURSES</b> |  |             |                |
| 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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Dr. Anil Yedage [asy002@chowgules.ac.in](mailto:asy002@chowgules.ac.in)

# **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, 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. 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, etc. This programme is considered as an essential qualification for school computer teachers. 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 Outcome (PO) for PGDCA**

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

PO1 : Acquire problem-solving skills, especially the ability to analyze, design and implement solutions.

PO2 : Demonstrate technical skills to be employed in a competitive position in the IT field related sectors.

PO3 : Start an Entrepreneurial venture.

PO4 : Work in different fields like content development, Multimedia, Website designing, Networking, Banking industry, Academics etc.

PO5 : Pursue the M.Sc (IT) programme of Goa University conducted at Chowgule College subject to meeting other eligibility criteria.

## **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:** ₹ 22570/-

\*Note: Fees for the academic year 2022-23 are **Subject to Change**

‡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                             |
|----------------|--|---|
| <b>Courses</b> | <b>First Semester</b>                    | <b>Second Semester</b>                    |
|                | Core Courses Credits – 12                | Core Courses Credits - 08                 |
|                | Elective Courses Credits – 08            | Elective Courses Credits - 12             |
|                | <b>Total First Semester Credits = 20</b> | <b>Total Second Semester Credits = 20</b> |

### Course Information (a)

| Sr. No.   | Course Titles                                   | Course Codes | Course Credits |
|---|---|--------------|----------------|
|   | <b>CORE COURSES</b>                             |              |                |
|   | <b>Semester I</b>                               |              |                |
| 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              |
|   | <b>Semester II</b>                              |              |                |
| 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 |
|---|--|--------------|----------------|
| <b>ELECTIVE COURSES</b>   |  |              |                |
| 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              |
| 14  | Web Development with FLASK             | PGD-CA.E.14  | 4              |
| All courses entail 03 hours of lectures and 02 hour of practical work per week. |  |              |                |

For additional information contact:

Ms. Judith M Dias Barreto (Course Co-ordinator)

[jmb001@chowgules.ac.in](mailto:jmb001@chowgules.ac.in) OR [computerscience@chowgules.ac.in](mailto: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.

### **College Classroom Attendance**

The College runs full time programmes and requires the students to attend classroom sessions. Students should have an aggregate of 75% attendance with at least 50% attendance in a particular course to complete the programme. Students having low attendance will not be allowed to appear for examinations.

### **Wearing of Identity Cards and Fines**

While on the College Campus the student must compulsorily wear their Identity Cards and must produce the same when any staff member of the College asks for identification. Library cards are not substitutes for official Identity Cards.

Please note the following fines are applicable:

- If a student is found not to be wearing the ID card - A fine of Rs 500/
- If students have swapped cards - A fine of Rs. 1000/- per defaulter
- For crossing over the Library flowerbeds fence or fence behind Animal House - A fine of Rs. 500/-
- For damaging College property - Estimated cost of the damage to be paid in full.
- If a student has lost the ID card, a new one can be procured at a cost of Rs. 350/- The cost of lanyard is an additional Rs 20/-

### **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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