



**ADAMAS UNIVERSITY**  
**SCHOOL OF BASIC AND APPLIED SCIENCES**  
**DEPARTMENT OF GEOGRAPHY**

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**Program Name:**  
**M.Sc. (GEOINFORMATICS)**

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**Course Structure 2026-27**

Course Structure modified as per the Board of Studies meeting held on  
26<sup>th</sup> March 2026

### 1st Year of PG curricular structure for 2-year PG Programmes (3+2)

| 1 <sup>st</sup> Year                                                                                                                  |                |                  |                                                                                                                                                              |                        |   |   |    |                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---|---|----|----------------------------------------------------------------------------------------------------------------------------------------------|
| SEMESTER I                                                                                                                            |                |                  |                                                                                                                                                              |                        |   |   |    |                                                                                                                                              |
| Sl. No.                                                                                                                               | Type of Course | Code             | Title of the Course                                                                                                                                          | Contact Hours Per Week |   |   |    | Remarks                                                                                                                                      |
|                                                                                                                                       |                |                  |                                                                                                                                                              | L                      | T | P | C  |                                                                                                                                              |
| 1                                                                                                                                     | CC             | GEO475           | Geoinformatics I                                                                                                                                             | 2                      | 0 | 3 | 4  |                                                                                                                                              |
| 2                                                                                                                                     | CC             | GEO476           | Digital Image Processing                                                                                                                                     | 2                      | 0 | 3 | 4  |                                                                                                                                              |
| 3                                                                                                                                     | CC             | GEO477           | Advanced Cartography and Surveying                                                                                                                           | 2                      | 0 | 3 | 4  |                                                                                                                                              |
| 4                                                                                                                                     | DSE/<br>MDE    | GEO478<br>GEO479 | <b>Discipline Specific Elective Courses-</b><br><br>1. Open-Source GIS Lab<br>2. Computer Fundamentals<br><br><b>SAWYAM MOOC Courses**</b>                   | 0                      | 0 | 6 | 4  | ** Any courses aligning with the themes of specified DSE courses, subject to availability in the portal within the stipulated time frame     |
| 5                                                                                                                                     | RM             | GEO480           | Research Methodology                                                                                                                                         | 1                      | 0 | 2 | 2  |                                                                                                                                              |
| 6                                                                                                                                     | Project        | GEO486           | Dissertation I                                                                                                                                               | 0                      | 0 | 2 | 2  |                                                                                                                                              |
| 7                                                                                                                                     | SEC 1          | CSE486           | Basic Programming                                                                                                                                            | 0                      | 0 | 3 | 2  | Hands-On Training                                                                                                                            |
| 8                                                                                                                                     | SEC 2          | ENG445           | Business Communication I                                                                                                                                     | 2                      | 0 | 0 | 2  |                                                                                                                                              |
| 9                                                                                                                                     | SEC 3          | CLL551           | Advanced Soft Skills and Aptitude I                                                                                                                          | 1                      | 0 | 0 | 1  |                                                                                                                                              |
| 10                                                                                                                                    | AEC            | AEC408/9/10      | Foreign Language I                                                                                                                                           | 2                      | 0 | 0 | 2  |                                                                                                                                              |
| Semester Credits                                                                                                                      |                |                  |                                                                                                                                                              |                        |   |   | 27 |                                                                                                                                              |
| SEMESTER II                                                                                                                           |                |                  |                                                                                                                                                              |                        |   |   |    |                                                                                                                                              |
| 1                                                                                                                                     | CC             | GEO481           | Geoinformatics II                                                                                                                                            | 2                      | 0 | 3 | 4  |                                                                                                                                              |
| 2                                                                                                                                     | CC             | GEO482           | Advanced Photogrammetry                                                                                                                                      | 2                      | 0 | 3 | 4  |                                                                                                                                              |
| 3                                                                                                                                     | DSE            | GEO483<br>GEO484 | <b>Discipline Specific Elective Courses-</b><br><br>1. Geostatistics<br>2. Geo-spatial Analysis and its Applications Lab<br><br><b>SAWYAM MOOC Courses**</b> | 0                      | 0 | 6 | 4  | ** Any courses aligning with the themes of specified DSE/MDE courses, subject to availability in the portal within the stipulated time frame |
| 4                                                                                                                                     | MDE            | CSE585<br>CSE586 | <b>Multi-Disciplinary Elective Courses-</b><br><br>1. Database Management Systems<br>2. Python for Geospatial Analysis<br><br><b>SAWYAM MOOC Courses**</b>   | 0                      | 0 | 6 | 4  |                                                                                                                                              |
| 5                                                                                                                                     | Project        | GEO556           | Dissertation II                                                                                                                                              | 0                      | 0 | 2 | 2  |                                                                                                                                              |
| 7                                                                                                                                     | SEC 1          | GEO485           | Computer-Aided Design                                                                                                                                        | 0                      | 0 | 3 | 2  | Hands-On Training                                                                                                                            |
| 8                                                                                                                                     | SEC 2          | GEO487           | Building Information Modelling                                                                                                                               | 0                      | 0 | 3 | 2  |                                                                                                                                              |
| 9                                                                                                                                     | SEC 3          | ENG446           | Business Communication II                                                                                                                                    | 2                      | 0 | 0 | 2  |                                                                                                                                              |
| 10                                                                                                                                    | SEC 4          | CLL552           | Advanced Soft Skills and Aptitude I                                                                                                                          | 1                      | 0 | 0 | 1  |                                                                                                                                              |
| 11                                                                                                                                    | AEC            | AEC503/4/5       | Foreign Language II                                                                                                                                          | 2                      | 0 | 0 | 2  |                                                                                                                                              |
| Semester Credits                                                                                                                      |                |                  |                                                                                                                                                              |                        |   |   | 27 |                                                                                                                                              |
| Total Credits                                                                                                                         |                |                  |                                                                                                                                                              |                        |   |   | 54 |                                                                                                                                              |
| Exit option with Post-Graduate Diploma after the first year or two semesters, with the completion of courses equivalent to 54 credits |                |                  |                                                                                                                                                              |                        |   |   |    |                                                                                                                                              |

**2<sup>nd</sup> Year of PG curricular structure for 2-year PG Programmes**

**One-year PG Programme after completion of a Four-Year UG Programme (4+1)**

**PG Curricular Structure with Coursework and Research**

| <b>2<sup>nd</sup> Year</b> |                       |             |                                             |                               |          |          |           |                   |
|----------------------------|-----------------------|-------------|---------------------------------------------|-------------------------------|----------|----------|-----------|-------------------|
| <b>SEMESTER III</b>        |                       |             |                                             |                               |          |          |           |                   |
| <b>Sr. No</b>              | <b>Type of Course</b> | <b>Code</b> | <b>Title of the Course</b>                  | <b>Contact Hours Per Week</b> |          |          |           | <b>Remarks</b>    |
|                            |                       |             |                                             | <b>L</b>                      | <b>T</b> | <b>P</b> | <b>C</b>  |                   |
| 1                          | CC                    | GEO550      | Geoinformatics III                          | 2                             | 0        | 3        | 4         |                   |
| 2                          | CC                    | GEO551      | Advanced Computation using Geo-AI           | 4                             | 0        | 0        | 4         |                   |
| 3                          | CC                    | GEO552      | Cloud Computation for Spatial Data Analysis | 0                             | 0        | 6        | 4         |                   |
| 4                          | DSE                   |             | <b>Discipline Specific Elective Courses</b> | 0                             | 0        | 6        | 4         |                   |
|                            |                       | GEO554      | 1. Spatial Data Science with R              |                               |          |          |           |                   |
|                            |                       | GEO555      | 2. Web and Mobile GIS                       |                               |          |          |           |                   |
| 5                          | Project               | GEO558      | Dissertation III                            | 0                             | 0        | 4        | 4         |                   |
| 6                          | ED                    | GEO553      | Startup Skill Development                   | 2                             | 0        | 0        | 2         |                   |
| 7                          | SEC 1                 | CSE587      | JavaScript for Geospatial Applications      | 0                             | 0        | 3        | 2         | Hands-On Training |
| 8                          | SEC 2                 | ENG447      | Business Communication III                  | 2                             | 0        | 0        | 2         |                   |
| 9                          | SEC 3                 | CLL651      | Advanced Soft Skills and Aptitude I         | 1                             | 0        | 0        | 1         |                   |
| <b>Semester Credits</b>    |                       |             |                                             |                               |          |          | <b>27</b> |                   |
| <b>SEMESTER IV</b>         |                       |             |                                             |                               |          |          |           |                   |
| 2                          | INT                   | GEO557      | Internship                                  | 0                             | 0        | 8        | 8         |                   |
| 1                          | Project               | GEO559      | Field Project                               | 0                             | 0        | 2        | 2         |                   |
| 3                          | Project               | GEO560      | Geoinformatics for Enterprise Applications  | 0                             | 0        | 4        | 2         |                   |
| 4                          | SEC                   | ENG448      | Business Communication IV                   | 2                             | 0        | 0        | 2         |                   |
| <b>Semester Credits</b>    |                       |             |                                             |                               |          |          | <b>14</b> |                   |
| <b>Total Credits</b>       |                       |             |                                             |                               |          |          | <b>51</b> |                   |

Total credit for 2-year M.Sc. (Geoinformatics) = 95