

आंध्रप्रदेश केंद्रीय विश्वविद्यालय
CENTRAL UNIVERSITY OF ANDHRA PRADESH
Ananthapuramu

Postgraduate Programme Structure
as per the UGC Credit Framework (NEP 2020)



VidyaDadatiVinayam
(EducationGivesHumility)

M.Sc.Geography & Geoinformatics



ProgrammeStructure
(With effect from AY 2024 - 25)

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M.Sc. Geography & Geoinformatics

Introduction

The Master of Science in Geography and Geoinformatics program at the Central University of Andhra Pradesh offers an advanced interdisciplinary education in geography and geoinformatics. This program is designed to equip students with a comprehensive understanding of spatial analysis, geographic information systems (GIS), remote sensing, and other geospatial technologies. Through a blend of theoretical knowledge and practical application, students will develop the skills necessary to address complex spatial challenges in various sectors including environmental management, urban planning, resource management, and disaster mitigation.

Programme Objectives

- To provide students with a solid foundation in the principles and theories of geography and geoinformatics.
- To develop students' proficiency in utilizing geospatial technologies such as GIS, remote sensing, and spatial analysis tools.
- To foster critical thinking and problem-solving skills necessary for addressing contemporary spatial challenges.
- To enable students to conduct independent research and contribute to the advancement of knowledge in the field of geography and geoinformatics.
- To prepare students for careers in academia, government agencies, non-profit organisations, and private industries where geospatial skills are in high demand.

Programme Outcomes

Upon successful completion of the Master of Science in Geography and Geoinformatics program, graduates will be able to:

- Demonstrate a deep understanding of the principles and theories of geography, geoinformatics, and related disciplines.
- Apply geospatial technologies effectively to analyse and solve complex spatial problems in diverse contexts.
- Design and execute research projects utilising geospatial data and methodologies.
- Communicate effectively through written reports, presentations, and other forms of dissemination, showcasing their knowledge and findings.
- Work collaboratively in multidisciplinary teams to address real-world spatial challenges.
- Demonstrate ethical and professional conduct in collecting, analysing, and interpreting geospatial data.

This program offers a dynamic learning environment with access to state-of-the-art geospatial laboratories, expert faculty, and opportunities for fieldwork and internships. Graduates of the Master of Science in Geography and Geoinformatics program will be well-positioned to pursue rewarding careers or further study in the rapidly growing field of geospatial science.



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Semester and Course wise Credits

| Semester | Discipline Specific Core(DSC) (L+T+P) | Discipline Elective (DSE) /Elective(EL) | Project Work Dissertation | Common Compulsory Course(CCC) | Inter-Disciplinary Elective | Internship | Lab | Total Credits |
|-------------------|---|---|---------------------------|--|-----------------------------|-------------------|------------------------------------|---------------|
| I | DSC1(4) DSC2(3) DSC3(4) DSC4(3) | DSE 1(4)/DSE 2(4)/ DSE 3(4) MOOC | - | | IDE 1 (3) ONLINE | | DSC 2 (1) DSC 4 (1) | 23 |
| II | DSC5(4) DSC6(3) DSC 7(3) DSC 8 (4) | DSE 4(4)/DSE 5(4)/ DSE 6(4) MOOC | - | CCC-2 Introduction to AI (4) | IDE2 (3) online | | DSC 6 (1) DSC 7 (1) | 27 |
| III | DSC 9(3) DSC10(3) DSC 11 (3) | DSE 7(4)/DSE 8(4)/ DSE 9(4) MOOC | | CCC-1 Building MathematicalAb ility (4) | IDE3 (3) online | Internship (2) | DSC 9(1) DSC10(1) DSC 11 (1) | 25 |
| IV | DSC 12(4) | - | Dissertation (16) | | | | - | 20 |
| Total | 41 | 12 | 16 | 8 | 9 | 2 | 7 | 95 |
| Percentage | 43.16 | 12.63 | 16.84 | 8.42 | 9.47 | 2.10 | 7.37 | 100 |

IDE: Interdisciplinary Elective **AECC:** Ability Enhancement Compulsory Course **SEC:** Skill Enhancement Courses **VAC:** Value-Added Courses
MOOCs: Massive Open Online Course



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Programme Structure with Course Titles

| Sl. No. | Course Code | Title of the Course | Credit Points | Credit Distribution | | |
|--------------------|---------------|---|---------------|---------------------|----------|----------|
| | | | | L* | T* | P* |
| Semester I | | | | | | |
| 1 | MGG 101 | Introduction to Geography | 4 | 4 | 0 | 0 |
| 2 | MGG 102 | Geographic Information Systems (GIS) Fundamentals | 4 | 3 | 0 | 1 |
| 3 | MGG 103 | Physical Geography | 4 | 4 | 0 | 0 |
| 4 | MGG 104 | Introduction to Geo informatics | 4 | 3 | 0 | 1 |
| 5 | MAP105 | Any one of the following | 4 | 3 | 0 | 1 |
| | | Cartography and Map Design | | | | |
| | | Database Management Systems | | | | |
| | | Geostatistics | | | | |
| 6 | MGG 112 (IDE) | MOOCs (Online/offline) | 3 | 3 | 0 | 0 |
| Total | | | 23 | 20 | 0 | 3 |
| Semester II | | | | | | |
| 1 | MGG 201 | Human Geography | 4 | 4 | 0 | 0 |
| 2 | MGG 202 | Remote Sensing | 4 | 3 | 0 | 1 |
| 3 | MGG 203 | Digital Image Analysis | 4 | 3 | 0 | 1 |
| 4 | MGG 204 | Regional Geography of India | 4 | 4 | 0 | 0 |
| 5 | MGG 211 (DSE) | Any one of the following | 4 | 3 | 0 | 1 |
| | | Web Mapping and Geo-Visualization | | | | |
| | | Levels of Regional Development in India | | | | |
| | | Demography and Population Geography | | | | |
| 6 | MGG 212 (IDE) | MOOCs (Online/offline) | 3 | 3 | 0 | 0 |
| 7 | MGG 213 CCC-I | Artificial Intelligence and Machine Learning | 4 | 4 | 0 | 0 |
| Total | | | 27 | 24 | 0 | 3 |



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| Sl. No. | Course Code | Title of the Course | Credit Points | Credit Distribution | | |
|---------------------|----------------|---|---------------|---------------------|----------|-----------|
| | | | | L* | T* | P* |
| Semester III | | | | | | |
| 1 | MGG 301 | Geographical Information Systems (GIS) Applications | 4 | 3 | 0 | 1 |
| 2 | MGG 302 | Practical in Advance Geospatial analysis | 4 | 3 | 0 | 1 |
| 3 | MGG 303 | Research Methods in Geography | 4 | 3 | 0 | 1 |
| 4 | MGG 311 (DSE) | Any one of the following | 4 | 3 | 0 | 1 |
| | | Advance Surveying and field work | | | | |
| | | Applications in Atmosphere, Health and Energy | | | | |
| | | Regional Planning and Development | | | | |
| 5 | MGG 312 (IDE) | MOOCs | 3 | 3 | 0 | 0 |
| 9 | MGG 313 CCC-II | Building Mathematical Ability | 4 | 4 | 0 | 0 |
| 10 | MGG 314 | Internship | 2 | 0 | 0 | 2 |
| Total | | | 25 | 19 | 0 | 6 |
| Semester IV | | | | | | |
| 1 | MGG 401 | Applied statistics and computing | 4 | 3 | 0 | 1 |
| 2 | MGG 411 | Dissertation | 16 | 0 | 0 | 16 |
| Total | | | 20 | 3 | 0 | 17 |
| Grand Total | | | 95 | 66 | 0 | 29 |

Semester-Wise Credit Distribution

| Semester | Total Credits | Cumulative credit at the end of the semester |
|------------|---------------|--|
| I | 23 | 23 |
| II | 27 | 50 |
| III | 25 | 75 |
| IV | 20 | 95 |



ఆంధ్రప్రదేశ్ కేంద్రీయ విశ్వవిద్యాలయ
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M.Sc. Geography & Geoinformatics

Important Information to Students

- I. Programme: M.Sc.In *Geography & Geoinformatics*.
- II. Eligibility: With at least 50% marks in the Bachelor's degree in Geography/Science/Technology/Architecture/Town planning/Statistics and any other allied/relevant areas and allied discipline with a minimum 50% marks or equivalent grade.
- III. The minimum duration for completion of any PG Programme is four semesters (two academic years) and the maximum duration is eight semesters (four academic years) or as per amendments made by the regulatory bodies from time to time.
- IV. A student should attend at least 75% of the classes, seminars, practicals/ lab in each course of study.
- V. All theory courses in the M. Sc. In Geography & Geoinformatics programme carry a Continuous Internal Assessment (CIA) component to a maximum of 40 marks and End Semester Examination (ESE) for a maximum of 60 marks. The minimum pass marks for a course is 40%.

All lab components carry a Continuous Internal Assessment (CIA) component to a maximum of 60 marks and End Semester Practical Examination (ESE) for maximum of 40 marks. The minimum pass marks for a course in 40%

- VI. A student should pass separately in both CIA and the ESE, i.e., a student should secure 16 (40% of 40) out of 40 marks for theory and 24 (40% of 60) out of 60 marks for lab components in the CIA. Therefore, a student should secure 24 (40% of 60) out of 60 marks for theory and 16 (40% of 40) out of 40 marks for lab components in the end semester examination (ESE).

Marks for the Attendance will be considered as follows:

| S. No | Attendance (%) | Marks |
|-------|----------------|-------|
| 1 | 95% or more | 5 |
| 2 | 90-94% | 4 |
| 3 | 85-89% | 3 |
| 4 | 80-84% | 2 |
| 5 | 75-79% | 1 |

- VII. A student failing to secure the minimum pass marks in the CIA is not allowed to take the end semester reexamination of that course. She/he has to redo the course by attending special classes for that course and get the pass percentage in the internal tests to become eligible to take the end semester examination.
- VIII. Students failing a course due to lack of attendance should redo the course.
- IX. Re-evaluation is applicable only for theory papers and shall not be entertained for other components such as practical/thesis/dissertation/ internship etc.
- X. A non-campus elective course is offered only if a minimum of ten or 40% of the students registered, whichever is higher, exercise their option for that course.