

ANDHRA UNIVERSITY

PROGRAM PROJECT REPORT

M.Sc. Physics



School of Distance Education

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Master of Science M.Sc. (Physics)

1. INFORMATION ON RELEVANCE OF PROGRAM

Introduction:

Andhra University is offering M.Sc. (Physics) program to assist the students in acquiring basic knowledge in the courses like Mathematical Physics, Numerical Methods, Classical Mechanics, Quantum Mechanics, Electromagnetic Theory, Electronics, Experimental Methods, Atomic and Molecular Physics, Nuclear Physics, Solid State Physics and in the specialized thrust areas such as Materials Science, Nano Science, Fiber Optics, Communication Electronics and project-based learning.

Objectives of the program:

- 1) To create foundation for research and development in Physics and to train students in skills related to research, education and industry.
- 2) To develop abilities and skills that encourages research and development activities which are useful in day-to-day life.
- 3) To help students to learn various experimental and computational tools thereby developing analytical abilities to address real time problems.
- 4) To inculcate scientific bent of mind and attitude relevant to science such as concern for efficiency, accuracy and precision, objectivity, integrity, enquiry, effective communication, ethical responsibilities, initiative and inventiveness.

2. INSTRUCTIONAL DESIGN

Eligibility & Admission Criteria:

B.Sc. with Physics as one of the subjects

Medium and Method of instruction:

The medium of instruction shall be English. The method of instruction shall comprise print and face to face interaction.

Course Material: Comprehensive printed course material, specially designed for self-study, shall be provided to every learner, Softcopy of the Self Learning Material (SLM) will be supplied to all the learners after confirmation of admission In addition to the course material, the learners are required to read suggested textbooks and articles published in journals.

Academic Counseling: Face-to-face classes are conducted at designated centres in all programs to enable the learners to have interaction with resource persons for clarification of doubts.

Examinations:

Each paper carries 70 marks end theory examinations and 30 marks internal assessment in the form of assignments. Exams are conducted at different affiliated colleges of the University by sending observers from University

Duration: The duration of each theory examination shall be three hours.

3. PROCEDURE OF EVALUATION

The theory papers of end examinations will be evaluated by different faculty members drawn from University and affiliated colleges.

Internal Evaluation:

Internal evaluation shall be made on the evaluation of the assignments submitted by the learners for 30 marks.

Reappearance:

A learner who has fails in any theory paper of any year shall have to reappear for the examination of that course in the following end examinations.

Betterment:

- ✓ Learners who have passed in all the courses of a program and who have obtained a Pass or SecondClass are eligible for attempting for Betterment of Grades.
- ✓ Learners who have already secured a First Class are not eligible for betterment of Grade.
- ✓ Betterment of Grades is permitted only once and that too within two years of passing.
- ✓ Learners can appear for betterment of all papers in a year.
- ✓ New Marks list / Provisional Certificate shall be issued to candidates who have improved their Class aftersubmitting the old Marks List/Provisional Certificate only.

4. Eligibility for the Award of Master of Science (M.Sc.) Degree:

Duration of the program:

The course of study for M.Sc. Program through Distance Learning shall be extended over a period of two academic years. However, a learner may complete the program in not more than four years including the study period.

A learner shall be eligible for the award of M.Sc., if he/she fulfils the following conditions.

- ✓ Registered and successfully completed all the courses.
- ✓ Successfully acquired the minimum required marks as specified in the curriculum.
- ✓ The learners should not have any dues to the University, and
- ✓ No disciplinary action is pending against the learner.

5. GENERAL INSTRUCTIONS:

The academic regulations should be read as a whole for purpose of any interpretation.

- In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice Chancellor is final.
- The University may change or amend the academic regulations, scheme of instructions and syllabus at any time and the changes and amendments made shall be applicable to all the learners with effect from a date notified by the University.

6. **FEE STRUCTURE:** Rs. 17,000/- tuition fees per annum

7. COURSE STRUCTURE:

Previous

S. No.	Paper	Name of the Paper
1	Paper -I	Mathematical Methods of Physics
2	Paper-II	Classical Mechanics
3	Paper-III	Introductory Quantum Mechanics
4	Paper-IV	Electronic Devices and Circuits
5	Paper-V	Atomic and Molecular Physics
6	Paper - VI	Statistical Mechanics
7	Paper - VII	Electrodynamics
8	Paper-VIII	Solid State Physics
9	Practical I	Modern Physics Lab

10	Practical II	Electronics Lab
		Record, Viva-voce & Assignments

Final

S. No.	Paper	Name of the Paper
1	Paper - I	Advanced Quantum Mechanics
2	Paper - II	P-II: Molecular Spectroscopy and Lasers
3	Paper - III	Fermi Surfaces and Order Disorder Transformations
4	Paper -IV	: Digital Electronics & Microprocessors
5	Paper -V	Computational Methods and Programming in "C"
6	Paper -VI	Nuclear and Particle Physics
7	Paper -VII	Magnetic Materials, Resonance Techniques and Semiconductor Devices
8	Paper -VIII	Communication Electronics
9	Practical I	Solid State Physics Lab
10	Practical II	Digital Electronics Lab
11		Record, Viva-voce & Assignments