

SCHOOL OF INSTRUMENTATION

PROGRAMME CODE: IN5A

PROGRAMME TITLE: MASTER OF SCIENCE (M.Sc.)
- INSTRUMENTATION

OBJECTIVES:

The broad objectives of the M.Sc. programme are as follows:

- To develop analytical skills covering both scientific and technical domains.
- To develop in depth understanding of the instrumentation technologies.
- To practice problem analysis and decision-making.
- To gain practical, hands-on experience in different sensors and instrumentation.
- To provide opportunities of higher studies in the area of instrumentation.

ELIGIBILITY:

55% in B.Sc. with at least two of following subjects (i) Physics (ii) Mathematics (iii) Computer Science (iv) Instrumentation (v) Electronics or honours degree in any of the above or equivalent.

OR

Candidates who have appeared in final year degree examination can also apply. Admission will be finalized if the result is declared before August 14, 2019 in the admission year and the candidate secures min.% of marks as mentioned above and in the above mentioned subjects.

AGE LIMIT: As per the directives of Government of Madhya Pradesh, There is no upper age limit for admission to various programmes.

ADMISSION PROCEDURE:

The admissions will be done as per merit in the entrance test conducted by the university.

SEATS: 30 (reservation as per state Govt. rules).

DURATION: Four Semesters (Two Years).

FEE STRUCTURE (2020-22):

Semester	Academic Fee	Development & Maintenance Fee	Students' Services Fee		Examination Fee	Total (Rs.)	
			Boys	Girls		Boys	Girls
First	2500	1500	3300	3111	2500	9800	9611
Second	2500	1500	2911	2722	2500	9411	9222
Third	2500	1500	3300	3111	2500	9800	9611
Fourth	2500	1500	2911	2722	2500	9411	9222

DEVI AHILYA VISHWAVIDYALAYA, INDORE

- Caution money (Refundable) of Rs. 4000/- will be charged additionally in the first semester.
- Alumni Fee of Rs. 500/- will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs.500/- per paper shall be payable.
- For NRI/ FN/ PIO Candidates, a fee of US\$ 3500 Per Annum shall be payable on yearly basis. They will have to pay a refundable deposit of US\$ 500 once at the time of admission.
- Hostel Fee and Central Library Fee will be extra.

PROGRAMME STRUCTURE (2020-22):

First Semester:

Code	Title	Credits (L T P)
IN5A-501	Measurement -I (Basics and Metrology)	4 (3-1-0)
IN5A-503	Programming in C++	4 (3-1-0)
IN5A -505	Analog Electronics	4 (3-1-0)
IN5A-507	Instrumentation Lab-I	4 (0-0-8)
IN5A -509	Workshop Practice-I	2 (0-0-4)
ELECTIVE COURSES-DISCIPLINE CENTRIC (Any One)		
IN5A -521	Engineering Mathematics	4 (3-1-0)
ELECTIVE GENERIC: The students can choose following course or any other generic course being run in this campus.		PG level
IN5A-541	Technical Communication	3 (2-1-0)
IN5A-551	Comprehensive Viva Voce	4

Second Semester:

Code	Title	Credits (L T P)
CORE COURSES		
IN5A-502	Measurement -II	4 (3-1-0)
IN 5A-504	Transducers and Actuators	4 (3-1-0)
IN 5A-506	Control Systems	4 (3-1-0)
IN 5A-508	Digital Electronics	4 (3-1-0)
IN 5A-510	Instrumentation Lab-II	4 (0-0-8)
IN 5A-512	Workshop Practice-II	2 (0-0-4)
ELECTIVE COURSES-DISCIPLINE CENTRIC (Any One)		
IN5A-522	Electronic Devices and Circuit Theory	4 (3-1-0)
IN5A-524	Optical Instrumentation	4 (3-1-0)
ELECTIVE GENERIC: The students can choose following course or any other generic course being run in this campus.		PG level
IN5A-542	Analytical Instrumentation	3 (2-1-0)
IN5A-552	Comprehensive Viva Voce	4

Third Semester:

Code	Title	Credits (L T P)
------	-------	-----------------

DEVI AHILYA VISHWAVIDYALAYA, INDORE

		P)
CORE COURSES		
IN5A-601	Data communication in Instrumentation systems	4 (3-1-0)
IN 5A-603	Signal and Systems	4 (3-1-0)
IN 5A-605	Microprocessor and Interfacing	4 (3-1-0)
IN 5A-607	Process Control Instrumentation	4 (3-1-0)
IN 5A-609	Instrumentation Lab-III	6 (0-0-12)
ELECTIVE COURSES-DISCIPLINE CENTRIC (Any One)		
IN5A-621	Bio-Medical Instrumentation	4 (3-1-0)
IN5A-623	Microcontroller	4 (3-1-0)
ELECTIVE GENERIC: The students can choose following course or any other generic course being run in this campus.		PG level
DS5A-641	Python	3 (2-1-0)
IN5A-651	Comprehensive Viva Voce	4

Fourth Semester:

Code	Title	Credits (L T P)
Project		
IN5A-602	Major Research Project / Industry Internship	12

Note: The above programme structure can be modified as per requirement from time to time in accordance with University Ordinance No. 14.

PROGRAMME OUTCOMES:

- Developing of analytical skills covering both scientific and technical domains.
- Getting opportunities of higher studies in the area of instrumentation.
- Demonstrate use of team work, leadership skills, decision making and organization theory.
- Engage in independent and life-long activities in the framework of technological advances in the field of Instrumentation and allied fields.

PROGRAMME SPECIFIC OUTCOMES:

- Demonstrate the knowledge on the critical analysis and problem-solving skills in application of instrumentation technology.
- Employ technologies to analyse the data of different sensors and instruments.
- Equip with fundamentals to perform independent research and development.
- Use of instrumentation technologies in automation of the industry.