

DEVI AHILYA VISHWAVIDYALAYA, INDORE
Institute of Engineering & Technology

M.Sc. (Applied Mathematics)
With Specialization in Computing & Informatics

(Faculty of Engineering)

Admission 2018-19

Khandwa Road, Indore-452017(MP) INDIA
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RATIONALE

In the last decade, there has been an unprecedented growth in areas of information science, communication and computing. Because of the fast growth, several abstract and core areas seem to be losing out of their due importance. On the other hand there lie several newer challenges, which require solution of these very concepts. There is requirement of synergy between different fields / areas so that critical problems are offered innovative solutions. This has resulted in increased demand of the personnel in industry who are well versed with abstract concepts in mathematical modeling & simulation & are capable to apply them in area of computer & information technology. Keeping in mind the current & future needs of the industry & academia, **M.Sc. (Applied Mathematics)** program was initiated by the institution in 2006. The Program is specialized in the area of Computing & Informatics. The course structure has been so planned that candidate after passing out shall not only be master of certain concepts & practices of Mathematical modeling, but shall be able to interplay between Mathematics and Applications, specially in the field of computing and informatics. After completing this program, the enthusiasts can pursue company jobs, M.Phil. and Ph.D.

OBJECTIVES

- To develop basic skills of solving in an efficient and effective way.
- To explore the computer science for promoting research & development.
- To develop manpower for problem solving at mathematical level and support information technologists.
- To strengthen the foundation in the fast growing software and web development industries.
- To provide placement opportunity to the BSc / BCA enthusiasts in the IT / software sectors.
- To transform graduate enthusiasts to specialists.

ELIGIBILITY

B.Sc. /B.C.A./ B.A./ B.E./ B.Tech. (with Mathematics as one subject) passed with minimum **50%** marks in aggregate. The candidate should have passed 12th with Mathematics subject. *The relaxation of 5% marks in Mathematics for SC/ST candidate.*

NUMBER OF SEATS

There shall be **30 seats** out of which 50% seats shall be reserved for MP Domiciles. Reservation for **SC/ST/OBC/** female as per applicable norms.

FEE STRUCTURE

Semester	Academic Fee	Dev.& Maint. Fee	Exam Fee	Internet Fee / Uni. Fee	Caution Money (Refundable)	Total Payable
Ist- Boys	5,500/-	2000/-	2500*	3300/-	4000/-	14,800/-
Ist- Girl	5,500/-	2000/-	2500*	3111/-	4000/-	14,611/-
IInd-Boys	5,500/-	2000/-	2500*	2911/-	-----	10,411/-
IInd-Girl	5,500/-	2000/-	2500*	2722/-	-----	10,222/-
IIIRD-Boys	5,500/-	2000/-	2500*	3300/-	-----	10,800/-
IIIRD- Girl	5,500/-	2000/-	2500*	3111/-	-----	10,611/-
IVth-Boys	5,500/-	2000/-	2500*	2911/-	-----	10,411/-
IVth-Girl	5,500/-	2000/-	2500*	2722/-	-----	10,222/-

CURRICULUM

A Proportionate mix of theoretical and applied aspects of Mathematics with Computer Science and Information Technology shall be taught during the semesters, under CBCS Scheme. The theoretical study, supplemented with relevant laboratory work, shall enhance the problem solving skills. Dissertation work (Optional) in the final semester shall provide a base of independent thinking through a minor project assignment. M.Sc. syllabus for the program is:

SEM I				
S.No.	Sub Code	Sub Name	Number of Credits L-T-P	Type
1.	AM1PC1	Algebra	3-1-0	Core
2.	AM1PC2	Discrete Mathematics	3-1-0	Core
3.	AM1PC3	Numerical Analysis / Integral Equations	3-1-0	Core
4.	AM1SS1	Advanced Communication Skills	2-0-0	Skill
5.	AM1GEx	Generic Elective I	3-1-0	Generic
6.	AM1PR1	Computer Lab-I (MATLAB)	0-0-2	Practical
7.	AM1CV1	Comprehensive Viva I	0-0-4	Viva
Total Credit for SEM I			20 actual + 4 Virtual credits	
List of Generic Elective I				
1.	AM1GE1	Computer Architecture/ Digital Electronics and Computer Organization	3-1-0	
2.	AM1GE2	Advanced Special Functions	3-1-0	
3.	AM1GE3	Financial Accounts	3-1-0	

SEM II				
S.No.	Sub Code	Sub Name	Number of Credits L-T-P	Type
1.	AM2PC1	Real Analysis / Measure Theory	3-1-0	Core
2.	AM2PC2	Advanced Differential Equations	3-1-0	Core
3.	AM2PC3	Theory of Computation	3-1-0	Core
4.	AM2ECx	Discipline Elective I	3-0-0	Disc. Elec.
5.	AM2EMx	Discipline Elective II	3-0-0	Disc. Elec.
6.	AM2PR2	Computer Lab-II (Of Subject of Discipline Elective -I)	0-0-2	Practical
7.	AM2CV2	Comprehensive Viva II	0-0-4	Viva
Total Credit for SEM II			20 actual + 4 Virtual credits	

List of Discipline Elective I				
1.	AM2EC1	Object Oriented Programming with Core Java	3-0-0	
2.	AM2EC2	Comp. Graphics /Multimedia	3-0-0	
List of Discipline Elective II				
1.	AM2EM1	Operations Research-I	3-0-0	
2.	AM2EM2	Soft Computing Techniques	3-0-0	

SEM III				
S.No.	Sub Code	Sub Name	Number of Credits L-T-P	Type
1.	AM3PC1	Topology	3-1-0	Core
2.	AM3PC2	Database Theory	3-1-0	Core
3.	AM3PC3	Mathematical Statistics	3-1-0	Core
4.	AM3SS2	Life Management Skills	2-0-0	Skill
5.	AM3GEx	Generic Elective II	3-1-0	Generic
6.	AM3PR3	Computer Lab-III (Research Tools)	0-0-2	Practical
7.	AM3CV3	Comprehensive Viva III	0-0-4	Viva
Total Credit for SEM III			20 actual + 4 Virtual credits	
List of Generic Elective II			3-1-0	
1.	AM3GE1	OS/Microprocessor	3-1-0	
2.	AM3GE2	Integral Transforms	3-1-0	
3.	AM3GE3	Financial Management		

SEM IV				
S.No.	Sub Code	Sub Name	Number of Credits L-T-P	Type
1.	AM4PC1	Complex Analysis	3-1-0	Core
2.	AM4PC2	Analysis of Algorithm	3-1-0	Core
3.	AM4PC3	Functional Analysis	3-1-0	Core
4.	AM4ECx	Discipline Elective III *	3-0-0	Disc. Elec.
5.	AM4EMx	Discipline Elective IV *	3-0-0	Disc. Elec.
6.	AM4Dxx	Discipline Elective V *	0-2-4	Diss. Work
7.	AM4PR4	Computer Lab-IV (Of Subject of Discipline Elective -III)	0-0-2	Practical
8.	AM4CV4	Comprehensive Viva IV	0-0-4	Viva
Total Credit for SEM IV			20 actual + 4 Virtual credits	
List of Discipline Elective III				
1.	AM4EC1	Advanced Java	3-0-0	
2.	AM4EC2	Unix / Linux Administration	3-0-0	
3.	AM4EC3	Computer Network/ Internet & Web Technology	3-0-0	
List of Discipline Elective IV				
1.	AM4EM1	Operations Research-II	3-0-0	
2.	AM4EM2	Mathematical Modeling	3-0-0	
3.	AM4EM3	Number Theory/Cryptography	3-0-0	

List of Discipline Elective V				
1.	AM4DW1	Dissertation (Minor)*	0-0-4	
2.	AM4DS1	Seminar	0-2-0	

* Student will select either **Discipline Elective III and IV or Discipline Elective V**. Internal evaluation of Dissertation work will be based on monthly Seminars (showing progress of work done) and Attendance of students. Final marking will be a combination of Internal and External evaluation.

ADMISSION PROCESS

The application forms can be downloaded from website www.ietdavv.edu.in and filled forms along the application fees Demand Draft of **Rs.750/- (Rs. 400/- for SC/ST candidates)** in favor of “Registrar, D.A.V.V., Indore” payable at Indore, are to submitted to Mr. Govind Aske, M-Block, IET, DAVV, Indore. The selection criterion is based on B.Sc. /B.C.A. marks and counselling/written test to be held at Institute level on prescribed date. Candidates are required to bring the Demand Draft of Rs. 1000/- in favor of “Registrar, Self- Finance IET DAVV” payable at Indore on the same day. The list of selected candidates shall be declared on the same day in afternoon. The requisite fee for Semester –I is to be paid within a week, in which Rs.1000/- shall be adjusted. In case admission is withdrawn this amount shall be forfeited.

Awards and Achievements in M.Sc. (Applied Mathematics):

1. The toper of M.Sc. course is awarded the Dr. Manohar Chandwani's **scholarship of Rs. 15, 000.**
2. The toper of M.Sc. course is awarded a Dr. Shankar Dayal Sharma's sponsored **Gold medal** at the University convocation ceremony.
3. Students of **reserved category** are awarded full academic fees as per the rules of Govt.
4. A student was selected in TCS recruitment campus.
5. Some students have cleared GATE, GRE and Bank PO and clerical exams.
6. Some are teaching in renowned colleges of M.P. as regular or visiting faculties.
7. Some are perusing higher degrees like B.Ed., M.Tech. and Ph.D. from DAVV and IIT Indore.
8. Some are teaching in Schools and coaching institutes.
9. Some have acquired company jobs.
- 10.3 Students have cleared written exam conducted by the Azem Premji Foundation of Education (an NGO).
- 11.A Student has prepared software for generating salary slip which is implemented in the Institute as a part of MSc project.
- 12.A student has completed her MSc. project from CAT while some others under the guidance of Senior UTD Professors and researchers.

ABOUT IET

Institute of Engineering & Technology (IET) is a UTD set up in 1996 by DAVV under Faculty of Engineering. It offers BE Programs in six engineering Branches namely – Computer, Mechanical, Electronics & Instrumentation, Electronics & Telecommunication, Information Technology & Civil and ME Programs in six specialization namely software Engg., Digital instrumentation, Digital Communication, Industrial Engineering & Management, Design & Thermal

Engineering, Information Security. PhD Programs in Engineering (all branches) and Applied Sciences are also offered. The campus of IET is situated adjacent to Khandwa Road and Ring road. Since its inception, IET has progressed with leaps & bounds and established itself as one of the best centers of imparting technical education in the central part of India. In Previous years, excellent placement of IET students has been recorded. M.Sc. (Applied Mathematics) student are also benefitted by this placement scenario. Giant companies such as TCS, Infosys, PCS, CSC, Tech Mahindra & many more have been recruiting in mass the enthusiasts from IET.

ABOUT DAVV

Devi Ahilya Vishwavidyalaya (DAVV) formerly, Indore Vishwavidyalaya, established in 1964 at Indore the pride city of Malwa is the leading University in the central part of India. DAVV has envisaged the need of qualified professionals in all walks of life and society. It has encompassed the front line areas of education include Science, Applied Science, Computer science, Information Technology, Biotechnology, Law, Journalism, Tourism, Management and Engineering. It has over 30 teaching departments offering, graduate and post-graduate programs. Most of them also provide the facilities of doctoral research. DAVV is a state University supported by both, the Government of MP and university Grant Commission (UGC). Its name appears in the common Wealth Year Book and it has been declared as Model University by the Government of Madhya Pradesh. DAVV has about 250 affillied colleges. It also provides centers and forums for learning and knowledge exchange for many small and medium scale industrial units and business houses, located in Indore, Dewas, Pithampur etc. It has also collabrtrion with IIT's, Foreign Universalities and Research Organizations.
