VIDNYAN MAHAVIDYALAYA, MALKAPUR
Programme Outcomes & Course Outcomes
(2022-23)

2.6.1: Programme outcomes, Programme specific outcomes and course outcomes for B.Sc., M.Sc. and Ph.D. Programmes:

The college has outline general Programme outcomes for the holistic development of the students. The college has vision statement to create a scientific and educational community that is open and welcoming, creative and adaptive and reknowned for the excellence is knowledge and skill.

Part A: For B.Sc. (U.G.) Programme:

I. Programme Outcomes:

College offers three year degree course to students mainly from rural areas around Malkapur. The prospectus of the institution provides all important and necessary information about course, fee structure and other relevant information. Apart from final examination conducted by the Sant Gadge Baba Amravati University, students are assessed by the teachers throughout the semester by giving assignments, test examinations, group discussions, field tours, projects, etc. The result of different assessments are communicated to the students by respective teachers in class. After completion of three years B.Sc. course, students can opt for higher education like M.Sc., M.C.A., M.B.A., B.Ed. or prepare for UPSC, MPSC examinations. The different career options like teaching in schools , medical representatives , banking jobs and other govt. services are also available for them.

II. Programme Specific Outcomes(PSO):

College offers three year Bachelor of Science degree course with three major subjects. Students can opt for any one group out of available three groups. Depending upon the interest of students, they can opt 3 subject group from the amongst Chemistry, Botany, Zoology, Maths, Physics and Computer Science subjects.

PSO1: For group including Chemistry, Botany and Zoology subjects:

After 3 year degree course, students can opt for Master degree in any of the major subjects like Chemistry, Botany or Zoology. Graduates can also opt for PG courses in applied fields like medicinal chemistry, forensic, microbiology, biochemistry, biotechnology and medical laboratory techniques.

PSO2: For group including Physics, Chemistry and Mathematics subjects:

Graduates can opt for master degree in Chemistry, Physics and Mathematics. They can also opt for various PG courses in various applied branches of Chemical and Physical Sciences like Astrophysics, Space Science, Energy Conservation, Geophysics, Nuclear Physics, Fuel Science and so on.

PSO3: For group including Computer Science, Mathematics and Physics:

Students who are interested in computer science generally opt this group. Graduates of this group generally opts for M.Sc. in Computer Science, Master of Computer

Applications, Various computer language Programmes and PG diploma or certificate courses. Jobs in IT field are also available for them.

III. Course Outcomes (CO) for various subjects:

CO1: Chemistry:
The students choosing Chemistry as one of the major subject are aquainted with the knowledge of chemical science including physical, organic and inorganic chemistry. Theory classes are supplemented by practicals in the laboratories and field works through minor projects.

CO2: Botany:
The students graduated with Botany as a major subject are aquainted with the knowledge of plants. They become aware regarding biodiversity and ecosystem. Theory classes are supported by practicals and minor projects.

CO3: Zoology:
The students graduated with Zoology as a major subject are aquainted with the knowledge of animals. They learn various techniques like measuring blood pressure, blood grouping, estimating haemoglobin, total counting of RBCs, WBCs etc. by which they can make a career in pathological laboratories.

CO4: Physics:
The students graduated with Physics as a major subject are aquainted with the knowledge of physical sciences.

CO5: Mathematics:
The graduates with Mathematics subject are able to demonstrate in depth knowledge in various areas of Mathematical Sciences.

CO6: Computer Sciences:
The graduates with Computer Science as one of the major subject gives knowledge of software, hardware and skill to handle computers.

Part B: For M.Sc. Chemistry (P.G.) Programme:

I. Programme Outcomes:

College offers 2 year (4 semester) degree course in Master of Science in Chemistry. After completion of the course, students can opt for career in chemical factories as chemist, quality controller, synthetic chemistry laboratories, R&D sections, etc. They can also opt for M.Phil., Ph.D., B.Ed. or examinations like SET, NET, GATE, UPSC, MPSC and other competitive examinations.

II. Programme Specific Outcomes:

During 2 years degree course, the students are able to gain detailed knowledge of chemical reactions, reaction mechanism, chemical kinetics, energy, environmental consciousness, medicinal chemistry, etc. They also gain the skill to handle equipments like spectrophotometer, pH meter, conductometer, distillation units and other laboratory techniques. They are also able to work independently and think critically. They are able to improve the skill for researches and presentation of research work and subject knowledge. They are also able to apply the acquired knowledge to the benefit of society.

III. Course Outcomes:

2 years M.Sc. course is divided in 4 semesters. In first three semesters, students are aquainted with the knowledge of Physical Chemistry, Organic Chemistry and Inorganic Chemistry. In semester 4 they acquire the knowledge in specially organic chemistry including spectrophotometric techniques like NMR, MASS, UV-VIS and IR, organic synthesis, natural products, name reactions, etc. To work independently and to apply the acquired knowledge for the benefit of society, a project is assigned to the students under the guidance of expert supervisor teacher. The project work is assessed by the examiner appointed by the university who is generally expert in the subject field and who is out of home university region.

Part C: For Ph.D. Chemistry Programme:

I. Programme Outcomes:

College offers Ph.D. in Chemistry. After completion of the Ph.D, students can opt for career in chemical factories as scientist, chemist, quality controller, synthetic chemistry laboratories, R&D sections, etc. They can also opt for post doctoral degree.

II. Programme Specific Outcomes:

During Ph.D. degree course, the students are able to gain deep knowledge of specific topic which may be needful to the society. They are also able to work independently and think critically. They are able to improve the skill for researches and presentation of research work and subject knowledge. They are also able to apply the acquired knowledge to the benefit of society.

III. Course Outcomes:

For getting Ph.D. admission, students possessing post graduation in Chemistry and passing Ph. D. entrance examination of university or NET/SET/M. Phil are eligible. They are required to gain knowledge of Research Methodology, Recent trends in Chemistry and ICT Skills during the course work. After completion course work students under the guidance recognised guide decides the topic and submits the synopsis for the innovative work. After sanction of Research Recognition Committee of University, the work is carried out at Research Center.