



**GOVERNMENT OF MAHARASHTRA**  
**INSTITUTE OF SCIENCE**

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad)

Nipat Niranjan Nagar, Caves Road,  
Aurangabad- 431 004, Maharashtra

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**ANNUAL QUALITY ASSURANCE REPORT**

**2010-2011**

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*Submitted To*

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**  
**(An autonomous institution of University Grants Commission)**

P. O. Box No. 1075, Opp. NLSIU, Nagarbhavi, Bangalore – 5600 072,  
Karnataka



# Annual Quality Assurance Report (AQAR) of the IQAC

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Academic Year  
2010-2011

## **PART-A**

**The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year**

1. Approach towards goals and objectives of the Institute with implementable solutions.
2. Encourage the faculty members to contribute to syllabi designing and revisions.
3. Motivate the teaching staff in faculty development programmes.
4. Organize and encourage the participation at seminars/workshops/conferences at the state and national level.
5. Focus on research activities to be carried out by staff and students, motivating faculty members for up-gradation of research activities and self development through submission of major and minor research projects to the funding agencies, research guidance and publications in reputed journals.
6. Providing consultancy services to industries and institutions.
7. Motivate faculty members and students to participate in extension activities and community services.
8. Inviting experts from various fields and alumni for guest lectures, seminars, workshops, conferences, competitive exam guidance, arrangements for summer trainings, industry visits, etc.
9. Provide health facilities for students and creating health awareness amongst the students.
10. Encourage students to participate in co-curricular and extra-curricular activities.
11. Undertake efforts to submit research proposals to different funding agencies.
12. Provide the guidance and facilities to the students for competitive examinations.
13. Undertake confidence building measures for students by conducting preliminary examination prior to semester-end examinations of the University.

## **PART-B**

### **PART B – 1 Activities reflecting goals and objectives of the Institution**

- The goals and objectives of the Institute were optimistically nurtured with implementable solutions.
- Faculty members from Biophysics Department were instrumental in implementing mini-projects, specialization courses and a new paper on Research Methodology in the M. Sc. Biophysics syllabus.

- Faculty member successfully completed a Refresher course at Dr. Babasaheb Ambedkar Marathwada University.
- One National level conference and one State level workshop was organized in the Institute campus. Faculty members have also worked as members of organizing committees of conferences in Institutions.
- Research students presented research papers in International conference. Faculty members published research papers in peer reviewed journals with impact factor.
- The faculty members provided consultancy services to industries and institutions.
- NSS unit carried out regular activities for community.
- Alumni visited the institute to offer guidance to the students regarding competitive exams, arrangements for summer trainings, industry visits, etc.
- Students were guided for competitive exams preparation and this reflected in a number of students qualifying NET and GATE exams.
- Study tours and industrial visits are organized in order to acquaint the students with the application of their theoretical knowledge.

**PART B – 2: New Academic programmes initiated (UG and PG): Nil**

**PART B – 3: Innovations in curricular design and transaction**

The Institute is affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad and the syllabus framed by the University is followed by all the Departments. The faculty members of the Department are involved in framing of the syllabus and revisions in the syllabus. The faculty members are associated with the Board of Studies of the University.

Shri. S.G. Kulkarni: Chairman of Ad- hoc Board in Biophysics

Mrs. V.N. Wadekar: Member of Ad- hoc Board in Biophysics

Dr. Mrs. S. M. Dharmadhikari: Member of the Board of Studies in Microbiology

Dr. Mrs. S.A. Peshwe: Member of Ad-hoc Board in Biotechnology

Dr. S.M. Deshpande: Member of Board of studies in Geology

Dr.A.G. Jadhav: Member of Board of studies in Bioinformatics

The Biophysics syllabus was revised by including specializations, mini-projects and Research Methodology paper

**PART B – 4: Interdisciplinary programmes started**

- The subjects in which PG training and research is implemented are of interdisciplinary in nature. The subject content and the papers of M.Sc. courses include the interdisciplinary and application approach.
- Students having M.Sc. Degree in Biotechnology are working for their Ph.D degree in the Department of Microbiology under interdisciplinary Ph.D. Programme.

**PART B –5: Examination reforms implemented**

- Examination reforms are under the purview of the concerned subjects' Adhoc Board of University, hence the procedures adopted as put forth by academic

council of University or Dr. Babasaheb Ambedkar Marathwada University, Aurangabad are implemented.

- Pre-University theory exams are conducted to make students accustomed to the pattern of questions and students are given suggestions for improvement through individual counseling. This helps to improve the performance and confidence of the students.

**PART B – 6: Candidates qualified - NET/SET/GATE etc.: 08**

Name of examination	Number of qualified candidates
NET	03
GATE	05

**PART B – 7: Initiative towards faculty development programme**

- Participation of faculty members in various training courses/refresher courses.

Sr. No.	Name of faculty member	Faculty Development Programme	Department
1	Mrs. Vaishali N. Wadekar	Refresher course in Environmental studies at Academic Staff College, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	Biophysics

**PART B – 8: Total number of seminars/workshops conducted: 2**

- State level workshop on Sensitization, Awareness and Motivation(SAM) was sponsored by UNIVERSITY GRANTS COMMISSION
- National Conference organized by Department of Geology

**PART B – 9: Research Projects a) Newly Implemented, b) Completed**

Sr. No.	Name of PI	Funding Agency	Completed/Newly implemented
1	Dr. A. G. Jadhav	UNIVERSITY GRANTS COMMISSION	Ongoing
2	Dr. (Mrs.) S. A. Peshwe	UNIVERSITY GRANTS COMMISSION	Ongoing

3	Dr. (Mrs.) S. M. Dharmadhikari	UNIVERSITY GRANTS COMMISSION	Ongoing
4	Dr. S. M. Deshpande	UNIVERSITY GRANTS COMMISSION	Ongoing
5	Dr. S. M. Deshpande	Department of Science & Technology, Govt of India	Ongoing
6	Prof. Sahera Nasreen	UNIVERSITY GRANTS COMMISSION New Delhi	Ongoing

**PART B – 10: Patents Generated, if any: Nil****PART B – 11: New Collaborative Research Programme**

Collaborative Research and training programme involving local hospitals were executed by Biophysics Department with an aim to give wide spectrum implant exposure.

**PART B – 12: Research grants received from various agencies**

Sr. No.	Name of Faculty member	Amount (Rs.)
1	Dr. S. A. Peshwe	1,60,000
2	Dr. A. G. Jadhav	1,00,000
3	Dr. Mrs. S. M. Dharmadhikari	1,35,000
4	Dr. S. M. Deshpande	11,41,000
5	Prof. Sahera Nasreen	1,50,000
	<b>Total</b>	<b>16,86,000</b>

**PART B – 13: Details of Research Scholars**

Sr. No.	Department	Number of students registered for Ph.D. degree
1	Geology	4
2	Microbiology	4
3	Biotechnology	6

**PART B – 14. Citation Index of Faculty members and impact factor**

Sr. No.	Name of the Faculty member	Department	Impact Factor	Citations
1	Dr. S. M. Deshpande	Geology	-	28
2	Dr. A. N. Dongre	Geology	4.693	80(total)
3	Dr. (Mrs.) S. M. Dharmadhikari	Microbiology	0.06	--
4	Dr. (Mrs.) S. A. Peshwe	Microbiology	0.045	20(total)
5	Dr. A. G. Jadhav	Microbiology	0.045	--
6	Dr. Sahera Nasreen	Botany	8.165	

**PART B – 15. Honors/Awards to the faculty members**

- Dr. R. R. Deshpande was appointed as Joint Director Higher Education (Additional charge), Maharashtra State by Director of Higher Education, Government of Maharashtra.
- Dr. R. R. Deshpande Nominated as member Board of management of Gokhale Institute of Politics and economics (Deemed University) by Director of Higher education, Govt. of Maharashtra for 2006-2013.
- Dr. R. R. Deshpande was nominated as Government nominee on the governing body of Kaivalya Dhamaa Samiti Lonavala by Director of Higher education, Govt. of Maharashtra for 2009-2011.
- Dr. R. R. Deshpande was nominated member Secretary on Career Advancement schemes constituted by Govt. of Maharashtra for placement of teachers of Government colleges and Institutes of Maharashtra State for 2009-2011.
- Dr. R. R. Deshpande was authorized by Government of Maharashtra Department of higher and technical education to file 42 leave petitions in Hon'ble Supreme Court, New Delhi during 2009-2013.
- Dr. R. R. Deshpande was nominated as a member of Governing body of Autonomous Institutes of Indian Institutions of Cost and Management Studies and Research, Pune from 2010-2013 by Government of Maharashtra.
- Dr. R. R. Deshpande was invited as a Guest of Honour to deliver lecture at "Green Chemistry: Training Education and Networks" organized in association with Beyond Benign Foundation, U.S.A and Green Chemistry Foundation, India on the occasion of celebration of International year of Chemistry 2011 held at R.D. National College and W.A. Science College, Mumbai.
- Dr. R. R. Deshpande was invited as a Resource person at Central Academy of State Forest Service, a premier Institution under the Ministry of Environment and Forest at New Forest, Dehradun to organize workshop on Solid waste Management and City Farming.
- Mrs. A. S. Vinchurkar awarded Ph.D. degree in Biophysics.
- Mr. S. G. Kulkarni was successfully completed DST-sponsored SERC School on 'Biophysics In Medicine: Advance Training in Imaging of Experimental Models' at Department of NMR and MRI facility at AIIMS, New Delhi during February 3-9, 2011.

- Mr. S. G. Kulkarni and his students have presented posters in International Symposium of Asian Biophysics Congress-Annual Symposium of Indian Biophysical Society -2011 at AIIMS, New Delhi during January 30-February 2, 2011.
- Mr. S. G. Kulkarni was academically interacted with Nobel Laurette Dr. Ada Yunath.
- Dr. Mrs. S. M. Dharmadhikari was invited to deliver a lecture in one day orientation programme on 12<sup>th</sup> Sept. 2010 on New Drug Discovery and Biotechnology organized by M. S. P Mandal's, Deogiri College, Aurangabad.
- Dr. Mrs. S.A. Peshwe was invited as a resource person to deliver a Virtual Seminar at Workshop on Biotechnology organized by Govt. College of Pharmacy, Karad.

**PART B – 16. Internal Resources generated**

Sr. No.	Name of Department	Resource generated (Rs.)
1.	Biophysics	Free of Cost consultancy
2.	Geology	Free of cost consultancy

**PART B – 17. Details of Departments getting SAP, COSIST / DST / FIST etc. assistance / recognition**

- Nil

**PART B – 18. Community services**

- The Institute has an NSS unit which is active since many years. The NSS unit conducts social and community services through NSS camps in and around Aurangabad city.
- Regular activity includes eradication of parthenium grass.
- Blood donation camp was organized as a part of NSS activity.

**PART B – 19: Teachers and Officers newly recruited: Nil**

**PART B – 20: Teaching, Non-Teaching ratio**

Ratio = 1.13: 1

**PART B – 21: Improvement in the Library Services**

- Library services were extended to the ex-students and students, researchers and teachers of other colleges.
- New books and periodicals were purchased during the academic year.

- The work of making database of e-books, journal articles and video lectures was initiated and will be made available free of cost on internet.
- News papers are made available for reading in boys' and girls' hostels.

**PART B – 22: New books / Journals subscribed and their values**

<b>Purchase of journals/books</b>	<b>Total number of journals//books</b>	<b>Cost in Rs.</b>
Books	117	1,26,161.00
Journals	34	3,62,987.00
<b>Total</b>	<b>151</b>	<b>4,89,148.00</b>

**PART B – 23: Courses in which student assessment of teachers is introduced and action taken on students' feedback**

Student feedback is obtained for all the courses conducted in the Institute. Based on serious note of the feedback, the specific issues are addressed with immediate effect.

The teachers are assessed regularly through the performance appraisal and confidential reports and on the basis of the teaching record, attendance record, annual report and result record.

**PART B – 24. Unit cost of education**

<b>Year</b>	<b>Student Intake</b>	<b>Unit cost with salary component (Rs.)</b>	<b>Unit cost with non-salary component (Rs.)</b>
<b>2010-11</b>	<b>184</b>	<b>114788.19</b>	<b>35954.75</b>

**PART B – 25. Computerization of administration and the process of admissions and examination results and issue of certificates**

1. The administration section is partially computerized and therefore computerized mechanism is used for administration and process of admission.
2. Admission process is executed through computerization since 1992.
3. Examination process is under the purview of the affiliating University and it is computerized.
4. College has its own website, which is updated for the convenience of the users.
5. College has its own e-mail ID for timely and convenient communication with students, parents and other stakeholders.

**PART B – 26. Increase in the infrastructural facilities: Nil**



**PART B – 27. Technology up-gradation**

- A proposal for Internet lease line, fire wall and WAN for the Institute campus was submitted to the Government.
- The lectures and seminars in all the departments were engaged by faculty members using LCD Projectors and other ICT resources.
- Internet facilities were used by students and faculty members for downloading educational resources and literature for research work.

**PART B – 28. Computer and internet access and training to teachers and students**

- The teachers have basic knowledge of computer operation and all teachers have qualified MH-CIT exam conducted by Government of Maharashtra. The computers are also used by the students for preparing presentations and to obtain information from internet. Internet facility is available for twenty four hours. Log books are maintained.
- Internet and computing facilities have been upgraded from time to time and are sufficient for the needs of the departments.

**PART B – 29. Financial aids to students**

Since the Institute is run by the Government, there is no special arrangement for financial aid to students from the Institute. The state government provides financial assistance for the students from weaker sections in the society such as the SC/ST/OBC and economically backward class. Approximately 50% of the students from M.Sc. course receive the scholarships and free ships. The institute facilitates disbursement of the financial aid from the government in the form of:

- Government of India Scholarship
- Government of India freeship
- Scholarship for economically backward (EBC) students
- Minority scholarship
- Scholarship for wards of Primary teachers (PTC)
- Scholarship for wards of secondary teachers (PTC)
- Merit scholarship

**PART B – 30. Activities in support from alumni association**

- Alumni employed at national and International institutions visit the Institute and mentor the students.
- The Alumni are invited to interact with students and faculty members, share their expertise, deliver lectures and suggest revisions in the syllabi.
- Alumni support students in recruitments and summer trainings.

**PART B – 31. Activities in support from Parent – Teacher Association**

- Parent-teacher association is yet to be established in the Institute. However, parents are invited for feedback on the curriculum. Parents and teachers meet

regularly and parents are kept apprised of the Departmental and Institutional activities.

- Parents'-Teachers' meet was organized by the individual Departments, wherein, the students, their parents, Director of the Institute, Head of the Departments and faculty members have a healthy interaction cum discussion on different issues concerning overall improvement and sustenance of quality in the education being imparted in the institute. A suggestion book is maintained for recording the views and suggestions of the parents.

#### **PART B – 32. Health Services**

- The health facility is available at all the Government hospitals. In addition, the students can visit DKMM Homeopathic Hospital which is adjacent to the Institute.
- Facility of health checkup is also made available in the campus (Boys' and Girls' Hostels).

#### **PART B – 33. Performances in sport activities**

- Various sports activities are conducted during the annual social gathering. The students are encouraged to participate in inter- university "Ashvamedh" sports event.

#### **PART B – 34. Incentives to outstanding sports person**

- Various sports activities are conducted during the annual social gathering. The winners are encouraged in terms of certificates conferred upon them at the hands of eminent personalities.

#### **PART B – 35. Students achievements and Awards**

- Ten research students of Microbiology Department presented research papers in the International Conference on Biotechnology for Better Tomorrow (BTBT) organized by Dr. Babasaheb Ambedkar Marathwada University, sub-campus Osmanabad and Microbiologist Society of India.
- Two research students of Microbiology Department were awarded with Best Paper Presentation in International Conference on BTBT organized by Dr Babasaheb Ambedkar Marathwada University subcampus, Osmanabad and Microbiology Society of India.
- One student of Microbiology Department was selected as Senior Research Fellow by Rajiv Gandhi Research Fellowship, UNIVERSITY GRANTS COMMISSION – New Delhi.

#### **PART B – 36. Activities of the guidance and counseling unit**

- The staff members motivate slow learners and prepare them to face the tough challenges ahead. The educational needs of the academically disadvantaged students are met by providing them study material, question banks and solving their queries by crossing the language barrier. This has helped in closing the achievement gap between high- and low-performing students. Personal

mentoring and counseling is also offered by the teachers as and when needed to resolve the personal problems faced by the students.

- The various activities are organized by the Institute to enable the students to develop certain skills Viz. Research projects, the students are provided an access to the computers in the department where they are guided by the teachers for various aspects like in the art of preparing power point presentation for the seminars, preparing posters for participation in conferences etc. Guidance is also given to the students for preparation of competitive examinations like NET/SET/GATE etc. The staff members provide academic and personal counseling to the students as and when needed. The students are guided and encouraged in availing facilities like e-journals, sophisticated instruments and bioinformatics software and statistical software skills.

#### **PART B – 37. Placement services provided to student**

- Recommendation of the students for research position placements are done by faculty through email and by issuing testimonials.
- Placement related activities are coordinated through an active “Placement and Training Cell” established in the Institute.
- Various alumni holding good positions in industries and research organizations personally contact the staff if they have vacancies. Students are guided for preparation of resume and interview skills. Placement cell interacted with industries in and around Aurangabad and arranged for in-campus and out-of-campus interview for the students.

#### **PART B – 38. Development programme to non-teaching staff**

- The non teaching staff is motivated to use computers for the office work.

#### **PART B – 39. Healthy practices to Institution**

- The institute motivated the students to organize programmes such as Annual Gathering, Science Day and Guest Lectures and seminars.
- Microbiology and Botany departments provide microbial cultures free of cost to various colleges.
- Botany department offers services to the Government Forensic Laboratory.
- Summer trainings were organized for students in various industries and organizations.
- Library access is provided to students beyond office hours during exams for better preparation.
- Students have been assigned uniform for the sake of maintenance of discipline.
- Attendance of students is strictly monitored and any irregularity is communicated to the parents.
- Parents Meet is conducted regularly.
- Regular class tests, assignments and tutorials are conducted.
- Regular guidance for different competitive exams is given to the students.
- Institute caters the need of the society through National Science Day celebrations, invited talks by eminent personality.

**PART B – 40. Linkages developed with national / International, Academic / Research bodies**

- Department of Geology has signed a Memorandum of Understanding (MoU) with School of Earth Sciences, SRT University, Nanded.
- Academic linkages with VSBT, Baramati; Govt. Medical College, Aurangabad; Pharmacy College, Aurangabad.
- Academic linkages with Academic Staff College, Dr. Babasaheb Ambedkar Marathwada University Aurangabad, SRTMU Nanded, Mumbai University for exchange of academic expertise, Evaluation of thesis and as Referee to conduct Ph.D. viva.
- Analytical assistance is availed from other research laboratories for the research work.
- Xcelris, Ahmedabad has linked up with the Institute for making use of the culture identification facility available in the Institute.

**PART B – 41. Any other relevant information the institution wishes to add**

- Microbiology Department received a grant of Rs. 4,80,000/- under XI plan by UNIVERSITY GRANTS COMMISSION for Department Development.
- Dr. Mrs. S. M. Dharmadhikari and Dr. Mrs. S. A. Peshwe were appointed as members of co-ordination committee for XI plan University Grants Commission.
- Dr. S.M. Dharmadhikari Was Appointed As A Co-Ordinator for NET-SET Guidance Cell under University Grants Commission XI plan.
- Dr. Mrs. S. A. Peshwe was appointed as a member of NET-SET Guidance Cell under University Grants Commission XI plan.
- Mr. A. G. Jadhav was appointed as a member of Networking Resources under University Grants Commission XI plan.
- Mr. A. G. Jadhav worked as editor of student's magazine.
- Microbiology Department arranged a Guest lecture of eminent personalities, viz. Prof. Mohd. Mussadiq (Head, Microbiology Dept, Shri Shivaji Science college, Akola), Prof. A. M. Deshmukh (Head, Microbiology Dept., Dr Babasaheb Ambedkar Marathwada University Sub-campus, Osmanabad), Dr. Shriram Bhosale (USA).
- Dr. Mrs. S. A. Peshwe worked as Member of organizing committee in SAM workshop sponsored by University Grants Commission
- Dr. A. G. Jadhav worked as Member of organizing committee in National Level conference organized by Geology Dept. Of Govt. Institute of Science.
- Dr. Mrs. S.A. Peshwe, Dr. A.G. Jadhav and Mrs. J.J. Bhuktar worked as member of organizing committee in International Conference on BTBT organized by Dr Babasaheb Ambedkar Marathwada University subcampus, Osmanabad and Microbiology Society of India.
- Dr. A.G. Jadhav participated and worked as a organizing committee of Applied Aspects of Life Sciences at Deogiri College, Aurangabad

**PART – C Outcomes achieved by the end of the year**

- The goals and objectives of the Institute were optimistically nurtured with implementable solutions.

- Faculty members from Biophysics Department were instrumental in implementing mini-projects, specialization courses and a new paper on Research Methodology in the M. Sc. Biophysics syllabus.
- Faculty member successfully completed a Refresher course at Dr. Babasaheb Ambedkar Marathwada University.
- One National level conference and one State level workshop was organized in the Institute campus. Faculty members have also worked as members of organizing committees of conferences in Institutions.
- Research students presented research papers in International conference. Faculty members published research papers in peer reviewed journals with impact factor.
- The faculty members provided consultancy services to industries and institutions.
- NSS unit carried out regular activities for community.
- Alumni visited the institute to offer guidance to the students regarding competitive exams, arrangements for summer trainings, industry visits, etc.
- Students were guided for competitive exams preparation and this reflected in a number of students qualifying NET and GATE exams.
- Study tours and industrial visits are organized in order to acquaint the students with the application of their theoretical knowledge.

#### **PART – D Detail plans of the institution for the next year**

1. Approaching towards goals and objectives of the Institute with implementable solutions.
2. Encouraging the faculty members to contribute to syllabi designing and revisions.
3. Motivation to the teaching staff in faculty development programmes.
4. Organization of and participation at seminars/workshops/conferences at the state and national level.
5. Focus on research activities to be carried out by staff and students.
6. Motivating faculty members and students to participate in extension activities and community services.
7. To encourage students to participate in co- and extra-curricular activities.
8. To undertake efforts to submit research proposals to different funding agencies.
9. To organize Parents'-Teachers' meet in the Departments for increasing interactions between the parents, teachers and students.
10. Tapping of funds from different funding agencies for development of existing infrastructure
11. Designing and implementation of different activities aimed at improvement of student skill and knowledge through invited talks from industry and academia.
12. Arranging and execution of study tour for keeping abreast with recent trends across fields related with the subject.
13. Active promotion of student participation in summer training, national/international symposia, conferences and workshops.
14. To initiate the performance of mini-projects at every semester during the course.
15. To initiate "Research methodology and Communication" training to MSc students.