

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY**CIRCULAR NO.SU/CBC & GS/Sci./Syllabi/08/2016**

It is hereby inform to all concerned that, as per the directives of the Hon'ble Vice-Chancellor to all the Heads of University Departments and Sub Centre to revise the curriculum given weightage of 75% & 25% the following Heads of the University Departments have submitted the said curriculum under the **Faculty of Science**.

Therefore, the Hon'ble Vice-Chancellor has **accepted following revised syllabi to be run at University Campus under Choice Based Credit and Grading System** in his emergency powers under Section-14[7] of the Maharashtra Universities Act, 1994 on behalf of the Academic Council.

Sr. No.	Name of the Course	Semester
[1]	M.Sc. Physics	I to IV
[2]	M.Sc. Chemistry	I to IV
[3]	M.Sc. Botany	I to IV
[4]	M.Sc. Bio-Chemistry	I to IV
[5]	M.Sc. Mathematics	I to IV
[6]	M.Sc. Statistics	I to IV
[7]	M.Sc. Environmental Science	I to IV
[8]	M.Sc. Computer Science	I to IV
[9]	M.Sc. Information Technology	I to IV
[10]	M.Sc. Nanotechnology	I to IV
[11]	M.Sc. Zoology	I to IV
[12]	M.Sc. Microbiology	I to IV
[13]	M.Sc. Biotechnology	I to IV

This is effective from the Academic Year 2016-17 & onwards.

The Ordinances and Regulations of Choice Based Credit and Grading System be applicable to all above courses as already circulated vide CIRCULAR NO. ACAD / NP/Ord. & Regulation/60/ 2012 dated 24-01-2012.

All concerned are requested to note the contents of the circular and bring notice to the students, teachers and staff for their information and necessary action.

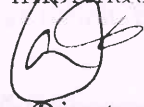
University Campus,
Aurangabad-431 004.
REF.NO. SU/SCI./SYLLA./2016/
3350-57

★

★

★

★


Director,
Board of College and
University Development.

Date:- 28-06-2016.

Copy forwarded with compliments to:-

- 1] **The Heads of the concerned University Departments and Sub Centre Osmanabad Dr. Babasaheb Ambedkar Marathwada University.**

Copy to :-

- 1] The Controller of Examinations,
- 2] The Section Officer, [M.Sc. Unit],
- 3] The Programmer [Computer Unit-1] Examinations,
- 4] The Programmer [Computer Unit-2] Examinations,
- 5] The Public Relation Officer,
- 6] The In-Charge, E-Suvidha Kendra, [Professional Unit], Rajarshi Shahu Maharaj Pariksha Bhavan, Dr. Babasaheb Ambedkar Marathwada University,
- 7] The Record Keeper.

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad – 431004 (MS)
Department of Physics

Minutes of the Departmental Committee Meeting held on October 13, 2017

The Departmental Committee meeting was convened on **October 13, 2017 at 4:30 pm** with Dr. Ramphal Sharma, Professor and Head in the chair, in his chamber. It was attended by Professor M. D. Shirsat, Professor S. S. Patil, Dr. (Mrs.) A. G. Murugkar, Dr. (Mrs) P. U. Ugile (P. P. Pawar), Dr. G. M. Dharme and Mrs. K. P. Nagori.

The meeting began with a warm welcome by the Chairman. The following business was transacted in the meeting:

1. **Internal and semester end examination:** All related issues were discussed and it was resolved that all faculty members will conduct Internal Tests of their respective courses (subjects) as per the notification issued by Head, Department of Physics and submit the names and contact details of External Examiners for semester end practical examination on or before Nov 11, 2017.
2. **Semester End Examination pattern for PHYR-331 and PHYR-332 :** This issue was discussed and it was resolved to adopt the following pattern for the evaluation of the students for the current academic year

Paper: PHYR-331 (Research Project Part I (Experimental Work) : 100 Marks

Project Report based on Experimental Work completed (so far)	: 40 Marks
Status of Work Completed and Performance of the Student	: 40 Marks
Power Point Presentation	: 20 Marks

Paper: PHYR-331 (Research Project Part II (Organization of Results) : 50 Marks

Project Report based on Organization of Results obtained (so far)	: 20 Marks
Status of Organization of Results and performance of the Student	: 20 Marks
Power Point Presentation	: 10 Marks

3. **Issue of implementation of Research Projects for Current Academic Year (First Year Students) :** This issues was discussed and it was resolved as below-
 - i) Generic Electives (Semester III & IV) will be allocated in the beginning of Second Semester.
 - ii) Once the Generic Electives are opted by the students, they will advised to select the research project (**in the beginning of the second semester only**) which will be relevant to the generic electives selected by the respective student.
 - iii) Research Projects will be allocated as per student preferences (Each Teacher will have to guide minimum number of students as per the formula mentioned in the following bracket (Total Number of Students / Total Number of Teachers). Teacher can select required number of any students (as per formula), if more number of students are approaching to the Teacher.

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad – 431004 (MS)
Department of Physics

- iv) In the second semester, students will have to identify 10 best Journals (SCOPUS indexed only) related to their research topic. Each students will have to review 10 research papers from 10 SCOPUS indexed Journals and make the presentation as per the schemes mentioned in the next bullet point.
- v) Scheme of Examination for PHYR-231 (Review of literature for Research Project) and PHYR-232 (Formulation of Topic of Research Project) will be as below

PHYR-231 (Review of literature for Research Project) : 50 Marks

Identification of 10 Best Journals (SCOPUS Indexed)	: 10 Marks
Report on Review of 10 Research Papers	: 30 Marks
Power Point Presentation	: 10 Marks

PHYR-232 (Formulation Research Topic) : 50 Marks

- o Synopsis of the Proposed Research Project having following details : 40 Marks
(Title of the Research Project, Review of literature, Hypothesis, Objectives, Methodology, Expected outcome and References)
 - o Power Point Presentation : 10 Marks
- vi) The examination of above mentioned papers will be conducted by Head of the Department and respective guide.
- vii) Students can contact the respective guide to get the advice for the preparation of above mentioned documents.
- viii) During Third and Fourth Semester there would be only one laboratory course (03 Credit) and one Research Project (10 Credit)
- ix) Accordingly, it was resolved to have minor modification in the structure of M. Sc. curriculum (at 3rd and 4th Semester). The revised structure will be as below

3rd Semester

Theory papers: 04 (04 credit each) = 16 credits
Laboratory Course 01 (03 Credit) = 03 credits
Research Project Part -I : 01 (10 Credit) = 10 credits

Total = 29 Credits

4th Semester

Theory papers: 04 (04 credit each) = 16 credits
Laboratory Course 01 (03 Credit) = 03 credits
Research Project Part -I : 01 (10 Credit) = 10 credits

Total = 29 Credits

- x) It was resolved to submit the revised structure of M. Sc. curriculum to Hon'ble Vice Chancellor for approval.

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad – 431004 (MS)
Department of Physics

xi) The examination pattern (scheme of Marks) for Research Project during 3rd and 4th semester will be as below -

- o Project Report based (Experimental Work Completed) : 40 Marks
- o Status of work Completed and Performance of the Student : 40 Marks
- o Power Point Presentation : 20 Marks

xii) Examination will be conducted by respective guide and external examiner

4. It was resolved to make to make 75 % attendance mandatory for all students for appearing examination. All faculty members will be submitting attendance record report to the Head of Department including research projects.
5. It was resolved to nominate Dr. G.M. Dharne as examination coordinator for Semester End Examination-2017
6. It was resolved to nominate Prof. S. S. Patil as a NIRF Co-ordinator.
7. It was resolved to nominate criteria wise co-ordinator for implementation of Action Plan sent by IQAC Director. Criteria wise co-ordinators will be as below
 - i) Criterion I – Curricular Aspects (150) --- Prof M. D. Shirsat and Dr. P. S. Ugile(Pawar)
 - ii) Criterion II – Teaching-Learning and Evaluation (200) ---Prof. B. N. Dole
 - iii) Criterion III – Research, Innovations and Extension (250) --- Prof.R.P.Sharma, Prof. K M Jadhav and Dr. G.M. Dharne
 - iv) Criterion IV – Infrastructure and Learning Resources (100) --- Dr. P. B. Undre
 - v) Criterion V - Student Support and Progression (100) --- Prof. S. S. Patil
 - vi) Criterion VI – Governance, Leadership and Management (100) ---Prof. P.W. Khirade and Prof. V.V. Navarkhele
 - vii) Criterion VII – Institutional Values and Best Practices (100) --- Dr. A. G. Murugkar

Prof Ramphal Sharma, Head, Dept of Physics will send a copy of action plan by email to each faculty member.

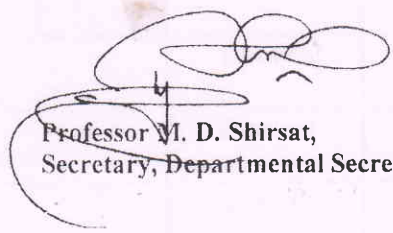
Co-ordinators of respective criteria will be implementing action plan in consultation with Head, Department of Physics.

8. It was resolved to seek administrative approval for purchase following equipments for M. Sc. First year laboratory from the budget allocated to M. Sc. First year laboratory (non-recurring budget head).
 - Magnetic Susceptibility balance (pound 6050)
 - Horizontal furnace
 - Hydraulic press

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad – 431004 (MS)
Department of Physics

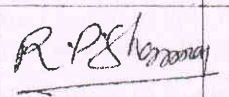
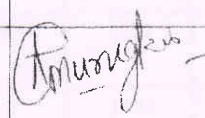

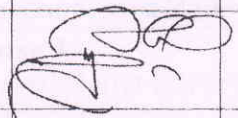

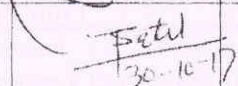
- Laser diode
 - Nano ammeter Qty 4
 - G. M. Counter set
 - Tetrode
9. It was resolved to seek administrative approval for purchase FTIR spectrophotometer for M. Sc. Second year Spectroscopy Laboratory from the budget allocated to M. Sc. Second Year Spectroscopy Laboratory (non-recurring budget head).
10. It was resolved to seek administrative approval for purchase MEMS software and 1-5 Computers for MEMS Laboratory from the budget allocated to MEMS Laboratory (non-recurring budget head).
11. It was also resolved that the Head, Dept. of Physics will initiate necessary steps to make the DST-FIST laboratory functional for students.

The meeting ended with thanks to the Chair.


Professor V. D. Shirsat,
Secretary, Departmental Secretary

- Copy to 1. P.A. to the Vice Chancellor,
2. The Director, B.C.U.D.,
3. The Finance and Accounts Officer,
4. Each member of The Departmental Committee and the faculty.

Members of the Departmental Committee

Sr. No	Name	Signature	Sr. No	Name	Signature
1	Prof. Ramphal Sharma		5	Dr. (Mrs) A. G. Murugkar	
2	Prof. K. M. Jadhav		6	Dr. (Mrs) P. P. Pawar	
3	Prof. M. D. Shirsat		7	Dr. G. M. Dharane	
4	Prof. S. S. Patil	 Patil 30-10-17	8	Mrs K. P. Nagori	

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

"NAAC Re - accredited 'A' Grade"

Department of Physics

"UGC - SAP & DST - FIST Funded"

Re - arranged structure of M. Sc. Physics Course

Course Structure

Semester I (Core and Foundation Courses)				
Course	Course Title	Teaching time/week	Marks	Credits
PHYC-111	Mathematical Methods in Physics	4 hours	100	4
PHYC-112	Classical Mechanics	4 hours	100	4
PHYC-113	Quantum Mechanics	4 hours	100	4
PHYC-114	Statistical Mechanics	4 hours	100	4
PHYF-115	Research Methodology	1 hours	25	1
COM-100	Constitution of India	2 hours	50	2
PHYL- 121	Lab course 1 (General Physics)	4 hours	50	2
PHYL- 122	Lab course 2 (Computational Physics based on PHYC -111, 112, 113 and 114)	4 hours	50	2
Total Credits for Semester I : 23 (Theory : 19 ; Laboratory : 04)				
Semester II (Foundation Courses)				
PHYF-211	Foundation Course in Electronics (Linear and Digital Electronics)	4 hours	100	4
PHYF-212	Foundation Course in Spectroscopy (Atomic and Molecular Physics)	4 hours	100	4
PHYF-213	Foundation Course in Nuclear Physics (General Nuclear Physics)	4 hours	100	4
PHYF-214	Foundation Course in Condensed Matter Physics (General Condensed Matter Physics)	4 hours	100	4
PHYL-221	Lab course 3 (Condensed Matter Physics + Nuclear Physics+ Spectroscopy)	4 hours	50	2
PHYL-222	Lab course 4 (Electronics + Computational Physics)	4 hours	50	2
PHYR-231	Review of literature for Research Project	4 hours	50	2
PHYR-232	Formulation of Topic of Research Project	4 hours	50	2
Total Credits for Semester II : 24 (Theory : 16 ; Laboratory : 04 ; Research Project : 04)				

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

"NAAC Re - accredited 'A' Grade"

Department of Physics

"UGC - SAP & DST - FIST Funded"

Semester III (Foundation and Generic Elective Courses)				
PHYF-311	Methods of Theoretical Physics	4 hours	100	4
PHYE-312	Generic Electives 1 (A1/ B1/ C1/ D1)	4 hours	100	4
PHYE-313	Generic Electives 2 (A2/ B2/ C2/ D2)	4 hours	100	4
PHYE-314	Generic Electives 3 (A3/ B3/ C3/ D3/ E3 / F3/G3/H3)	4 hours	100	4
PHYL-321	Lab course (Based on Electives A1/ B1/ C1/ D1) (Based on Electives A2/ B2/ C2/ D2)	6 hours	50	3
PHYR-331	Research Project Part I (Experimental Work) + (Organization of Results)	12 hours	100	10
Total Credits for Semester III : 29 (Theory : 16 ; Laboratory : 03 ; Research Project : 10)				
Semester IV (Generic and Open Elective Courses)				
PHYE-411	Generic Electives 4 (A4/ B4/ C4/ D4)	4 hours	100	4
PHYE-412	Generic Electives 5 (A5/ B5/ C5/ D5)	4 hours	100	4
PHYE-413	Generic Electives 6 (A6/ B6/ C6/ D6) (Research Oriented)	4 hours	100	4
OELE-101	Service Course of Department of Physics (from other Departments)	4 hours	100	4
PHYL-421	Lab course 7 (Based on Electives A4,A5/ B4,B5/ C4,C5/ D4,D5)	6 hours	50	3
PHYR-431	Research Project Part II (Interpretation of Results) + (Dissertation and Presentation)	6 hours	100	10
Total Credits for Semester IV : 29 (Theory : 16 ; Laboratory : 03 ; Research Project : 10)				
Total Credits : 105 (Sem I : 23 + Sem II : 24 : Sem III : 29 + Sem IV : 29)				

R.P. Sharma
Dr. Ramphal B. Sharma
Professor and Head
01/11/2017

Dr. Ramphal B. Sharma
M.Sc., Ph.D., PDF (Italy)
Professor and Head
Department of Physics

Dr. Babasaheb Ambedkar Marathwada University
Aurangabad-431004, India (M.S.)

B. S. Chavhan
Hon'ble Vice - Chancellor