

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/  
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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 Mahara Bhavan, Dr. Babasaheb Ambedkar Marathwada University,
- 7] The Record Keeper.

Minutes of the Departmental Committee meeting held on 01-01-2014 at 03:30 p.m.

The meeting of the Departmental Committee of the Physics department was held on 01/01/2014 at 03:30 p.m. with Dr. M.D. Shirsat, Head of the department, in chair, in his chamber. The other members present were Professor Dr. K. M. Jadhav, Dr. S. S. Patil, Dr. S.D. Deshpande, Dr. B. N. Dole, Dr. Mrs. P.P. Pawar and Mr. D. R. Jadhav. The following business was transacted in the meeting:

1. The minutes of the last meeting held on 3/12/2013 were confirmed.
2. Time tables for M.Sc. II semester and IV semester were approved. It was further resolved to claim the remuneration for extra work load.
3. Revision of the following courses was approved:

Semester	Course	Title	Specialization
II	PHY-406	Statistical Mechanics	
III	PHY-412-B2	Special Paper 2- Molecular Spectroscopy	Spectroscopy
III	PHY-457-B1	Lab Course 5 – Atomic Spectroscopy	Spectroscopy
III	PHY-458-B2	Lab Course 6 – Molecular Spectroscopy	Spectroscopy
IV	PHY-414-A3	Advanced Sensor Technology	Electronics: Special paper 3
IV	PHY-414-B3	Applied Spectroscopy	Spectroscopy Special paper 3
IV	PHY-421-E4	Modern Trends in Spectroscopy	Spectroscopy : Elective
IV	PHY-460-A3	Lab Course 7 Unit-I : 8051 –Microcontroller Unit II: Advanced Sensor Technology	Electronics
IV	PHY- 460 : B3	Lab Course 7 – Advanced Optics experiments	Spectroscopy

4. It was resolved to arrange the “Educational Tour” in the third week of February 2014.
5. The following Coordinators for the various activities were appointed:

Name of the Coordinator	Activity
Farewell Function	Dr. S. D. Deshpande
National Science Day	Dr. Mrs. P. P. Pawar
Dr. P.B. Undre	Extracurricular activities and Notice Board activities for students

6. The letter of request received from Mr. V. K. Raut was placed before the Departmental Committee for consideration. Looking into the state of health of the student, as stated in the ‘Medical Certificate’ submitted by him, the request was considered on humanitarian grounds and it was resolved to permit him to appear for the examinations.

Dr. P. B. Undre  
Assistant Professor  
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Ref. No. / Phy./2016/

May 27, 2016

Minutes of the departmental committee meeting held on 27-05-2016 at 3:30 p.m.

To discuss on various issues, an emergency meeting of the Departmental Committee was convened and held on May 27, 2016 at 3.30 pm in the Chamber of the Head, Department of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. It was attended by Professor P. W. Khirade, Professor S. S. Patil, Dr. S. D. Deshpande, Dr. P. B. Undre and Shri P. K. Salunke. Professor M. D. Shirsat (FIST Coordinator) was present as Special Invitee. Professor Ramphal Sharma, Head, chaired the meeting. In the DC meeting following decisions were taken:  
The meeting began with warm welcome by the chairman.

1. Common Entrance Test for M. Sc. Admission 2017-18 was conducted between 11:00 am to 1:00 pm. Answer sheets were checked and cross checked between 2:00 pm to 6:00 pm. Result prepared accordingly was placed before the DC and it was unanimously approved. DC gave its nod to uploading answer key.
2. DC gave its nod to the final proposal of FIST prepared by Professor M. D. Shirsat (Coordinator) in consultation of Head and all faculty members.
3. DC also approved the list of equipment's mentioned in the proposal (i) Raman Spectrometer, (ii) Spectrofluorometer and (iii) Ellipsometer as a common equipment facility.
4. DC also requested to Professor M. D. Shirsat to send soft and hard copy of the FIST proposal to DST.
5. M. Sc. Syllabus: As per circular from BCUD (SU/CBCGS/2016/199-243, dated 07/05/2016), M. Sc. Physics Curriculum was revised as per the based on discussion held in the faculty meeting on 18/05/2016 and 23/05/2016. DC requested to Head of Department to send the revised syllabus to office concerned.

AOB:

I. Pre Ph.D. Course: Pattern for Pre-Ph.D. Course 2016.

A. Research Methodology (Compulsory): 50 Marks

Duration: 90 minutes.

Question No. 1: Compulsory multiple choice type 5 questions (carrying 2 marks each).

Question No. 2 to 7: Descriptive type (Student will have to solve any five questions from question n. 2 to 7) will carry 10 marks each.

**B. Allied Courses (Compulsory): 100 Marks**

Duration: 3 hours

Question No. 1: Compulsory multiple choice type 10 questions (carrying 2 marks each).

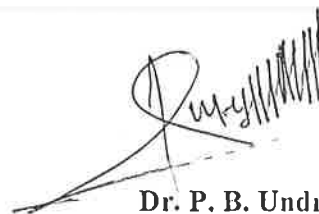
Question No. 2 to 7: Descriptive type (Student will have to solve any five questions from question no. 2 to 7) will carry 16 marks each.

**II. Probable date of Pre-Ph.D. course examination from 20<sup>th</sup> June to 30<sup>th</sup> June 2016. Each paper shall be conducted on separate day.**

**III. New DC constituted will come into effect from Jul 07, 2016. Accordingly the Departmental Committee will consists of following members:**

Name of member	Designation	
Professor K. M. Jadhav	Professor	50% from Professor
Professor M. D. Shirsat	Professor	
Professor S. S. Patil (Secretary)	Professor	
Dr. Mrs. A. G. Marugkar	Associate Professor	50% from Associate Professor
Dr. Mrs. P. P. Pawar	Associate Professor	
Dr. G. M. Dhanu	Assistant Professor	30% from Assistant Professor


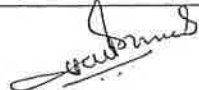

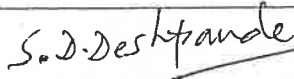


The meeting ended with thanks to the Chair.



**Dr. P. B. Undre**  
Secretary,  
Departmental Committee

- 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.
  5. Registrar.

Members of the Departmental Committee

Professor Dr. R. B. Sharma	
Professor Dr. P. W. Khirade	
Professor S. S. Patil	
Dr. S. D. Deshpande	
Dr. P. B. Undre	
Mr. P. K. Salunke	

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. Dhame 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.

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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**

- **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**)
  - **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 3<sup>rd</sup> and 4<sup>th</sup> Semester). The revised structure will be as below

**3<sup>rd</sup> 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

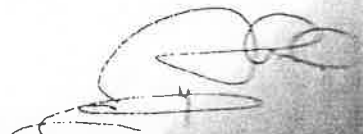
Total = 29 Credits

**4<sup>th</sup> 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.



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Department of Physics

xi) The examination pattern ( scheme of Marks ) for Research Project during 3<sup>rd</sup> and 4<sup>th</sup> 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 QAC 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

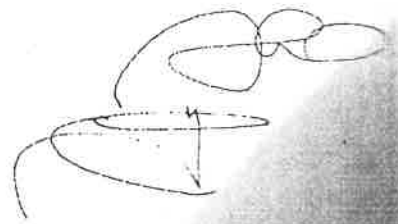
vii) Criterion VII – Institutional Values and Best Practices (100) --- Dr. A. G. Murugkar

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

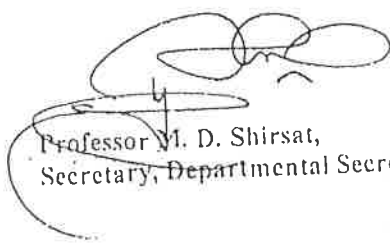




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Department of Physics

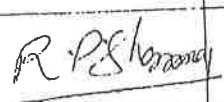




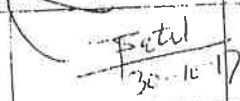
- Laser diode
  - Nano ammeter Qty 4
  - G. M. Counter set
  - Tetrode
9. It was resolved to seek administrative approval for purchase FTIR spectrophotometer for M. Sc. Second year Spectroscopy Laboratory from the budget allocated to M. Sc. Second Year Spectroscopy Laboratory (non-recurring budget head).
10. It was resolved to seek administrative approval for purchase MEMS software and I-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 M. 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

	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	