

S-01 &amp; 02 June, 2016 AC after Circulars from Circular No.100 &amp; onwards

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**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY****CIRCULAR NO. SU/Sci./B.Sc. Syllabi/100/2016**

It is hereby notified for information to all concerned that, on the recommendation of the Ad-hoc Board in Computer Science and I.T. the **Academic Council at its meeting held on 01 & 02 June, 2016** has accepted the following revised syllabi as mentioned against their names under the Faculty of Science :-

Sr. No.	B.Sc. III Year Revised Syllabus	Semester
[1]	<b>B.Sc. Computer Science</b> Degree Course	V & VI
[2]	<b>B.Sc. Information Technology</b> Degree Course	V & VI
[3]	<b>B.C.A. Science</b> Degree Course	V & VI
[4]	<b>B.Sc. Animation</b> Degree Course	V & VI
[5]	<b>B.Sc. Computer Science</b> Optional	V & VI
[6]	<b>B.Sc. Information Technology</b> Optional	V & VI
[7]	<b>B.C.A. Science</b> Optional	V & VI
[8]	<b>B.Sc. Computer Maintenance</b> Optional	V & VI

This is effective from the **Academic Year 2016-2017** and onwards.

These syllabi are also available on the **University Website** [www.bamu.ac.in](http://www.bamu.ac.in)

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

University Campus,  
Aurangabad-431 004.  
REF.No.SU/B.Sc./2016/2389-639  
**A.C.M.A.I.No.10**

Date:- 07-06-2016.

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**Director,**  
**Board of College and**  
**University Development.**

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S-01 & 02 June, 2016 AC after Circulars from Circular No.100 & onwards

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**Copy forwarded with compliments to :-**

- 1] **The Principals, affiliated concerned Colleges,  
Dr. Babasaheb Ambedkar Marathwada University.**

**Copy to :-**

- 1] The Controller of Examinations,
- 2] The Section Officer, [B.Sc. Unit],
- 3] The Section Officer, [B.C.S. Unit],
- 4] The Programmer [Computer Unit-1] Examinations,
- 5] The Programmer [Computer Unit-2] Examinations,
- 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.

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**S\*/-0070616/-**

**NAAC Re-accredited with Grade 'A'**

**Dr. Babasaheb Ambedkar Marathwada University**

Aurangabad-431004



**REVISED SYLLABUS OF  
B.Sc. (Computer Science)  
Three Year Course  
(With Effective From: 2014-15)**



**हे ज्ञानिची पवित्रता | ज्ञानीचि आथि ||**

**Dr. Babasaheb Ambedkar Marathwada University**

Aurangabad-431004.

Tel.No. : 0240-2403400/431, Fax:0240-2403113

Website : [www.bamu.ac.in](http://www.bamu.ac.in), <http://bamua.digitaluniversity.ac.in>

**Dr. Babasaheb Ambedkar Marathwada University.**

**Appendix 'A'**

A Candidate shall be admitted to the I year of the B.Sc. (Computer Science) degree course only if he/she satisfies the following condition:

1. He/ She must have passed the higher secondary (multipurpose) examination conducted by H.S.C. board Government of Maharashtra with science / technical subjects Or an Examination of any statutory University and Board recognized as equivalent thereto.

OR

He/She must have passed examination prescribed at the end of second year of the junior college conducted by the H.S.C. board, Government of Maharashtra with English, Second language, Physics, Chemistry, Mathematics and or Biology or one of the technical subjects prescribed at the said examination as the optional or elective subjects or an examination recognized as equivalent thereto.

OR

Candidate having offered prescribed vocational course (MCVC) with Computer techniques/I.T./Electronics.

OR

Three years Diploma Course in engineering conducted by the board of technical Education, Maharashtra State.

2. He/ She must have passed at qualifying examination.

A candidate who has passed the B.Sc.(Computer Science) examination of this university may be allowed to present himself subsequently at the degree examination in a subject or subjects other than those he has taken earlier provided that he puts in three years of attendance as a regular candidate for First, Second and Third year in the subject or subjects concerned excluding compulsory English, Second Language and remaining optional subject(s).

A candidate shall not be allowed to appear for such examination if he has passed the higher examination.

The Degree of Bachelor of Science (Computer Science) shall be conferred on candidate who has pursued a regular course of study consisting of six semesters in the relevant subject as prescribed and has appeared at the end examination and passed under the credit based system in all the examination prescribed for the Degree course in the faculty.

The pattern of the examination and the scope is indicated in the syllabus.[Annexure B]

- The Number of students in a theory class shall not exceed 60.
- Maximum number of students in a batch for practicals in first four semesters shall consist of 20 students and for fifth & sixth semester the batch shall consist of 15 students.
- The rules for admission to the subsequent (next) semesters will be the same as per the University guidelines.
- For Each course the concerned teacher will have to conduct Class tests after completion of 15 and 20 lectures. The mark list of the same is to be submitted to the university authority within 7 working days after the completion of class tests.
- Final Examination will be conducted by the University based on the complete syllabus.
- Final Practical Examination will be conducted by the university and examiners will submit the marks in the prescribed format of students for practical examination to the university.

**The Number of Teaching Staff & infra-structure required to run the course will be as follow:-**

The graduation is very important phase in the life of our young students. The college responsibly is not only to deliver a quality syllabus based education, but also to motivate them to be a good healthy citizen. In this direction, the college must have sufficient facilities to run the course. A guideline is listed below. The College must have following minimum facilities:

**Infrastructure:**

1. One Class room to accommodate 60 students. (approximately 250 sq.ft.)
2. A well equipped software Laboratory having a LAN system of 30 nodes and having internet connectivity with broad band. All legal software, antivirus software, firewall be available for smooth functioning of the laboratory.
3. A hardware laboratory having twenty microprocessor kits with add on cards as per their syllabus. Staff room of 100 sq.ft. with one table and one Almeria for each faculty member.
4. One office space of 100 sq.ft. with appropriate furniture.
5. One lady room of 100 sq.ft. with attached toilet.
6. One reading room of 200 sq.ft. with seating arrangements for at least 30 people. The library may be accommodated in the library.
7. One copy of every text book among five students for each subject be available along with one copy of reference book as per the syllabus.
8. Library must subscribe for computer and scientific magazines. Appropriate general reading materials must be available for overall development of students.
9. An open space for sports activities. The college must be encouraged to have sport equipments.

**Staff:**

1. The head of the department in the scale of reader/Professor.
2. The minimum number of teachers must be appointed as per the work load. Per semester, the work load may be computed on the basis of theory classes, tutorials and practical class per batch. Minimum number of teachers to run the course must be five excluding the head. Teachers must be appointed by the university/UGC norms. The quality of the course is directly related to quality of teachers for the course.
3. There must be one clerk in the office to look after administrative work. The placement of all staffs must be maintained properly.
4. One qualified librarian
- An appropriate number of class IV employees.

**Curriculum Structure and Scheme of Evaluation: B.Sc.(C.S.)**

Sr. No.	Paper Number	Name of the Paper Titles	Scheme of Teaching	Scheme of Evaluation(Marks)		
			Theory / Practical (Lect. /week)	Theory / Practical ( Marks )	Exam Duration ( in hrs.)	Total Mark
<b>I Semester</b>						
1	CS101-T	Computer Fundamentals	3	50	2	50
2	CS102-T	Digital Electronics	3	50	2	50
3	CS103-T	Microprocessor - I	3	50	2	50
4	CS104-T	C Programming – I	3	50	2	50
5	CS105-T	Communication Skill – I	3	50	2	50
6	CS106-T	Mathematical Foundation	3	50	2	50
7	CS107-P	Office Suite	4	50	2	50
8		C Programming – I	4	50	2	50
9	CS108-P	Microprocessor – I	4	50	2	50
10		Digital Electronics	4	50	2	50
<b>II Semester</b>						
1	CS201-T	Data Structure	3	50	2	50
2	CS202-T	Operating System	3	50	2	50
3	CS203-T	Microprocessor – II	3	50	2	50
4	CS204-T	C Programming – II	3	50	2	50
5	CS205-T	Communication Skill – II	3	50	2	50
6	CS206-T	Numerical Computation Methods	3	50	2	50
7	CS207-P	Data Structure	4	50	2	50
8		Microprocessor – II	4	50	2	50
9	CS208-P	C Programming – II	4	50	2	50
10		Numerical Comp. Methods	4	50	2	50

Sr. No.	Paper Number	Name of the Paper Titles	Scheme of Teaching	Scheme of Evaluation(Marks)		
			Theory / Practical (Lect. / week )	Theory / Practical ( Marks )	Exam Duration ( in hrs.)	Total Mark
<b>III Semester</b>						
1	CS301-T	Advance Data Structure	3	50	2	50
2	CS302-T	Unix Operating System	3	50	2	50
3	CS303-T	PC Maintenance	3	50	2	50
4	CS304-T	Programming in CPP	3	50	2	50
5	CS305-T	Database Management System	3	50	2	50
6	CS306-T	Statistical Method	3	50	2	50
7	CS307-P	Data Structure using CPP	4	100	2	100
8		DBMS	4		2	
9	CS308-P	PC Maintenance	4	100	2	100
10		Unix	4		2	

<b>IV Semester</b>						
1	CS401-T	Software Engg.	3	50	2	50
2	CS402-T	Fedora	3	50	2	50
3	CS403-T	Basic of Networking	3	50	2	50
4	CS404-T	Core Java	3	50	2	50
5	CS405-T	Adv. DBMS	3	50	2	50
6	CS406-T	Web Fundamental	3	50	2	50
7	CS407-P	Java in Fedora OS	4	100	2	100
8		Web Fundamental	4		2	
9	CS408-P	Based in Adv. DBMS and N/w	4	100	2	100
10		Mini Project	4		2	



Sr. No.	Paper Number	Name of the Paper Titles	Scheme of Teaching	Scheme of Evaluation(Marks)		
			Theory / Practical (Lect./week)	Theory / Practical ( Marks )	Exam Duration ( in hrs.)	Total Mark
<b>V Semester</b>						
1	CS501-T	Software Cost Estimation	3	50	2	50
2	CS502-T	Basic of Android O. S.	3	50	2	50
3	CS503-T	Core Java-II	3	50	2	50
4	CS504-T	Basic of Computer Graphics	3	50	2	50
5*	CS505-T	Beginners Prog. with PHP	3	50	2	50
6*	CS506-T	Basic of ASP.Net	3	50	2	50
7 <sup>#</sup>	CS507-T	Data Mining	3	50	2	50
8 <sup>#</sup>	CS508-T	Advanced Networking	3	50	2	50
9	CS509-P	Pr. Based on Adv. Java	4	100	2	100
10		Pr. Based on Comp. Graphics	4		2	
11	CS510-P	Pr. Based on Android O.S.	4	100	2	100
12		Pr. Based on PHP/ASP.Net	4		2	
<b>VI Semester</b>						
1	CS601-T	Software Quality & Testing	3	50	2	50
2	CS602-T	Android Application Development	3	50	2	50
3	CS603-T	Theory of Computation	3	50	2	50
4	CS604-T	Advanced Computer Graphics	3	50	2	50
5*	CS605-T	Advanced Prog. With PHP	3	50	2	50
6*	CS606-T	Programming Language: C#	3	50	2	50
7 <sup>#</sup>	CS607-T	e-Commerce	3	50	2	50
8 <sup>#</sup>	CS608-T	Ethics and Cyber Law	3	50	2	50
9	CS609-P	Pr. Based on Android Develop.	4	100	2	100
10		Pr. Based on PHP / C#	4		2	
11	CS610-P	Major Project	8	100	4	100
12						

**\* and #: Any one paper is to be opted from the group**

## PATTERN OF QUESTION PAPERS

Note : 1) All questions carry equal marks.

2) All questions are compulsory.

Q. No.	Format	Marks
<b>1.</b>	Multiple Choice/Fill in the blank/Match the pair/ one line answer. 1) 2) • • 10)	1 x 10 = 10
<b>2.</b>	a) b)  OR  a)	5 * 2 = 10    10
<b>3.</b>	a) b)  OR  a)	5 * 2 = 10    10
<b>4.</b>	a) b)  OR  a)	5 * 2 = 10    10
<b>5.</b>	Write Short Notes On: (Any Two ) a) b) c) d)	5 * 2 = 10
	<b>Total</b>	<b>50</b>

\* Not More than 3 bits should be asked in each question of 10 Marks.

(Only for Paper Setter)