

## DEPARTMENT OF BIOTECHNOLOGY

The revision of M.Sc., Medical Biotechnology and Clinical Research syllabus was initiated by a team of Senior Faculty from the department constituted in July 2014; the committee scrutinized the syllabus and suggested several changes in the contents of the syllabus, title of the paper, introduction of new paper and merging of existing papers in theory and practical. The departmental committee also suggested for changes in the course name from M.Sc., Medical Biotechnology and Clinical Research to M.Sc., Applied Medical Biotechnology and Clinical Research because of the incorporation of several applied papers included in the syllabus.

The Board of Studies for M.Sc., Medical Biotechnology and Clinical Research meet on 20.09.14 to approve the received syllabus which will be effective from 2015-2016 onwards.

The following members were present

1. Dr.K.Rajagopal – **Chairman BOS**  
Director, School of Life sciences  
HOD, Department of Biotechnology  
Vels University
2. Dr.C.Arulvasu – **Member – External**  
Associate Professor  
Department of Advanced Zoology and Biotechnology  
University of Madras, Guindy, Chennai-5
3. Dr.V.Ravichandran – **Member- Internal**  
Director, School of Pharmaceutical Sciences.  
Vels University
4. Dr.G.Kathiravan – **Member- Internal**  
Department of Biotechnology  
Vels University
5. I Eunice Valentina – **Student Representative**  
II M.Sc., Medical Biotechnology and Clinical Research

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*Dr. C. Arulvasu*  
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## BOS Meeting & Minutes

The total credits for the course changed to 90 instead of 98 given in 2011-2012 regulations for this course.

BOS approved that there shall be no minimum mark for internal assessments however there shall be a passing minimum in semester and examination both for theory and practical's /project and vice voce examination.

### The pattern of question paper will be

PART-A [50 words answer] [10x3=30]  
PART-B [200 words answer] [5x8=40]  
PART-C (500 words answer) [2x15=30].

The Core Paper- I Medical Biochemistry and Cell Biology title renamed as Applied Medical Biochemistry and Cell Biology .The syllabus was also changed.

The Core Paper- II Applied Clinical Microbiology has been renamed as Clinical Microbiology and Medical Record Science .The syllabus for Medical Record Science has been incorporated newly.

The Elective Paper I Human Biology is renamed as Human Physiology and minor changes were made in the syllabus.

The Elective Paper II Nano and Pharmaceutical Biotechnology have been shifted from semester I of previous regulation 2011-2012 to semester II as Elective Paper III in the regulation 2015-2016.

The Elective Paper II of First semester has been replaced with Human Genetics and Developmental Biology with a revised syllabus.

In semester II the Core Paper IV has been renamed as Advanced Clinical and Molecular Diagnostic Techniques instead of Advanced Clinical Diagnostic Techniques in the previous regulation. The entire syllabus has been revised.

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The Core Paper V Genetic Engineering, Genomics and Proteomics has been renamed as Genetic Engineering and Computational Biology. Several new topics have been included and the syllabus was revised.

The Core Paper VI Advanced Medical Biophysics and Biomedical Instrumentation has been newly incorporated in the syllabus.

Core Paper VII practices few experiments were included according to the present day need.

The Elective Paper IV Title-Introduction to Tissue Engineering and Stem Cells Biology has been renamed it as Tissue Engineering and Stem Cells Biology the syllabus content was also modified .

In the Second Semester Internship duration was reduced from three weeks to two weeks and a credit was given. A student must present and submit a report on Internship at the end of third semester.

The Core Paper VII Introduction to Clinical Research and Clinical Operations has been changed to Medical Immunology and Clinical Research in this paper three units given for Medical Immunology which is newly introduced and two units allotted for Clinical Research.

The Core Paper Statistics for Clinical Research has been modified as Statistics for Clinical Research and Research Methodology recent topics on Research Methodology were included in this paper.

The Core Paper Clinical Data Management of previous regulations 2011-2012 has been modified as Clinical Operations and Clinical Data Management, several new topics were included in this paper.

A new Core Paper is included in the present syllabus in the third semester is Biomedical and Waste Management. And another Core Paper introduced in third semester in Medical Coding and Pharmacovigilance.

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Elective Paper -V Regulatory affairs, GLP, IPR, Entrepreneurship and Bioethics in Clinical Research have been retained however few changes were made in the syllabus.

Elective Paper -VI Project Management and Business Development syllabus and content retained as such.

Research lab, Hospital and Industrial visit made mandatory for 3 days in the third semester. The candidate has to submit report on their visit a credit will be given for that.

The Fourth semester the candidate does a major project for their entire semester. In the previous regulation 2011-2012 a Core Paper Pharmacovigilance and Safety Monitoring given along with the project on the students request and due to practical constraints the paper removed from fourth semester and 3 units of this paper have been incorporated in the Core Paper XII of the new regulation along with Medical Coding.

All the above modification in the syllabus was carried out in order to meet the advancement in the field of Medical Biotechnology and Clinical Research, to equip the students to compete with other university students for job and research, to face the competitive exams at national level, this syllabus revision was carried out.

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