

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130
DEPARTMENT OF BIOTECHNOLOGY
TWENTY FIFTH MEETING OF BOARD OF STUDIES
Held on 22.09.2021 at 10 A.M.

MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. V. Manivasagan	Chairman, BOS/Biotechnology
2	Dr.K. Balakrishnan	University Nominee
3	Dr.S. Renganathan	Academic Council Nominee
4	Dr.C. Muthukumaran	Academic Council Nominee
5	Dr.M. Shivaraj	Industry Representative
6	Mr.R.Asvinkumar	Alumini Representative
7	Dr. K. Saranya	Member, BOS/Biotechnology
8	Dr. P.Ezhil Kumar	Member, BOS/Biotechnology
9	Dr.P.Balaji	Member, BOS/Biotechnology
10	Dr.K.Suresh	Member, BOS/Biotechnology
11	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert /HOD, BME, ACE

25.1 To consider the minutes of the Twenty fourth of the Board of Studies in Biotechnology held on 01.04.2021

RESOLVED that the minutes of the Twenty fourth meeting of Board of Studies in Biotechnology has been considered

25.2 To consider the revised Syllabi of 8th semester B. Tech. (Biotechnology) offered for the batch of Students admitted in 2018 – 2019 under Regulation 2018 (CBCS). (Annexure-I)

RESOLVED that the revised syllabi VIII Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2019 under Regulation 2018 be approved (Annexure-I)

25.3 To consider the revised Syllabi of 6th semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2019 – 2020 under Regulation 2018 (CBCS). (Annexure-II)

RESOLVED that the revised Syllabi of VI semester B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2020 under Regulation 2018 be approved (Annexure-II)

25.4 To consider the revised Syllabi of 4th semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2020 – 2021 under Regulation 2018 (CBCS). (Annexure-III)

RESOLVED that the revised Syllabi of IV semester B.Tech (Biotechnology) for the batch of students to be admitted in 2020-2021 under Regulation 2018 be approved (Annexure-III)

25.5 To consider the revised syllabi of 2nd Semester B.Tech Biotechnology to be offered for the batch of students to be admitted in 2021-2022 under Regulation 2018 (Annexure-IV)

RESOLVED that the revised Syllabi of II semester B.Tech (Biotechnology) for the batch of students to be admitted in 2021-2022 under Regulation 2018 be approved (Annexure-IV)

25.6 To consider the panel of Examiners for the purpose of Evaluation. (Annexure-V)

RESOLVED that the list of Examiners for practical Examinations, Project work and central evaluation be approved (Annexure-V)

Date: 22.09.2021




Chairman, Board of Studies
Faculty of Biotechnology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635130
Krishnagiri (DT), Tamilnadu.

Department of Biotechnology – 25th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
VIII	818BTT01	BIOETHICS, IPRAND ENTREPRENEURSHIP	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • rDNA guidelines-guidelines for rDNA research activities, • mechanism of implementation of biosafety guidelines • Four Backgrounds of Biotechnology Entrepreneurs • Entrepreneurship and Intrapreneurship
VIII	818BTE01	TISSUE ENGINEERING	The following topics are included in the existing syllabus, <i>Mechanical Measurements And Physical Properties.</i> <i>Role Of Nanotechnology in prosthesis construction.</i> <i>Gene Therapy Physiological Models</i> <i>Tissue Engineered Therapies</i> <i>Product characterization, Components, Safety, Efficacy</i>
VIII	818BTE02	TELEMEDICINE	New course introduced
VIII	818BTE03	MOLECULAR PATHOGENESIS	The following topics are included in the existing syllabus, <i>Influenza virus: Intracellular stages, Neuraminidase & Haemagglutinin entry, M1 & M2 proteins in assembly and disassembly, action of amantadine.</i> <i>virulence factors damaging the host tissues</i> <i>modulation of immune response by vaccines, other immuno modulators.</i>
VIII	818BTE04	INDUSTRIAL SAFETY	New course introduced

VIII	818BTE05	STEM CELLS IN HEALTHCARE	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Stem cells: Definition, Classification, Sources and Properties</i> • <i>Types of stem cells: methods of isolation, study of stem cells and their viability IPSC, embryonic stem cells, cancer stem cells.</i> • <i>Preservations of Stem cell, Skeletal muscle stem cell Mammary stem cells intestinal stem cells –keratinocyte stem cells of cornea – skin and hair follicles –tumour stem cells. Factors influencing proliferation, physical, Chemical and molecular methods for differentiation of stem cells– hormonal role in differentiation. Differentiation and Identification, Characteristics of mesenchymal stem cells,</i>
VIII	818BTE06	TOTAL QUALITY MANAGEMENT	New course introduced
VIII	818BTE07	AGRICULTURAL BIOTECHNOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Important industries producing biopesticides, marine source as biofertilizer. • vegetables like capsicum, cucumber, tomato, cherry tomato. • Nutrient management
VIII	818BTE08	COMPUTATIONAL BIOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • PBD, CSD, SCOP • Stochasticity in gene expression • data Vs metadata
VIII	818BTE09	MEDICAL CODING	<p>The following topics are included in the existing syllabus,</p> <p><i>Usage of CPT</i></p> <ul style="list-style-type: none"> • <i>Manuals, Software usage, Examples of CPT Speciality Code Practice,</i> • <i>HCPCS Coding,</i> • <i>Basic steps of HCPCS coding,</i>

			<ul style="list-style-type: none"> • <i>Differentiation of CPT and HCPCS Coding.</i>
VIII	818BTE10	BIOSAFETY	New course introduced
Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			

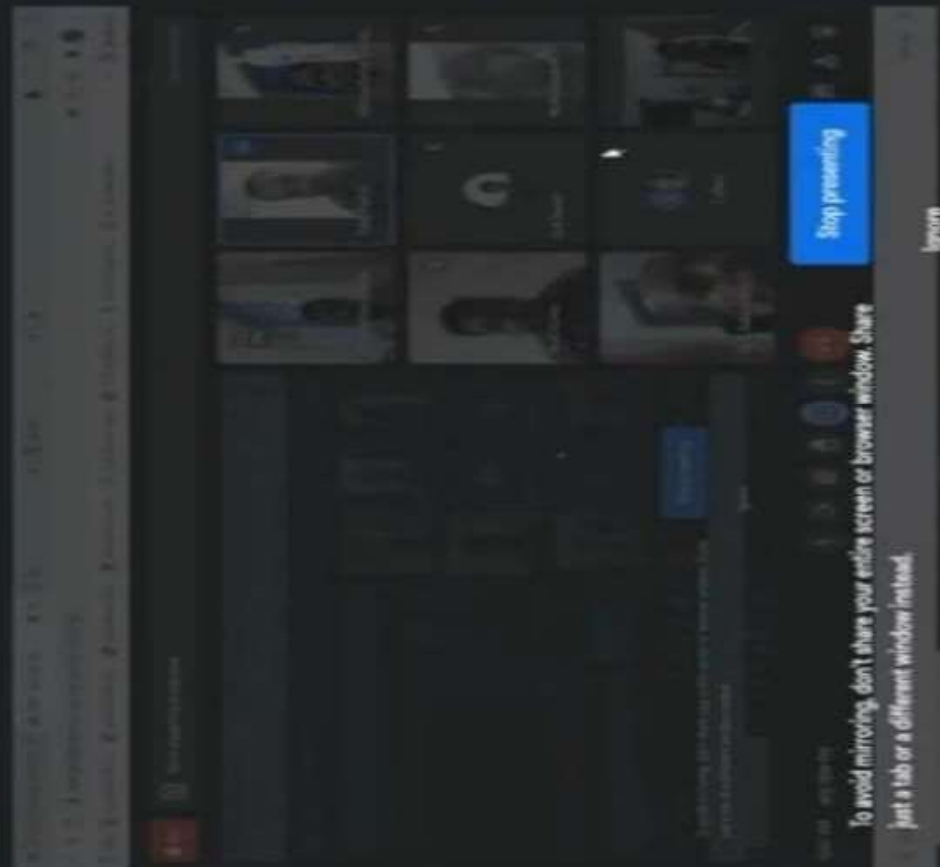

22/09/2021

Chairman, Board of Studies
Faculty of Biotechnology (UG)
Adiyamaan College of Engineering (Autonomous)
Hosur - 635130
Krishnagiri (DT), Tamilnadu.



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 Udhaya Surya Ushaka	 enthi Kumar	 You
 Balaji Paulraj	 Dr.K.Suresh	 2 others
 Anandhan Subbiah	 Anand Kumar	 Dr. A. Balakrishnan



Manivasagan BT

MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. N.G.Ramesh Babu	Chairman, BOS/Biotechnology
2	Dr. V. Manivasagan,	Member, BOS/Biotechnology
3.	Dr. K. Saranya	Member, BOS/Biotechnology
4.	Dr.H.Vijaya Ragavan	Member, BOS/Biotechnology
5.	Dr.P.Balaji	Member, BOS/Biotechnology
6	Dr.V.Venkatesham	Member, BOS/Biotechnology
7.	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert /HOD, BME, ACE
8.	Dr.K. Balakrishnan	University Nominee
9.	Dr.S. Renganathan	Academic Council Nominee
10.	Dr.C. Muthukumaran	Academic Council Nominee
11	Dr.M. Shivaraj	Industry Representative
12	Mr. R. Asvinkumar	Alumini Representative

- 24.1 To consider the minutes of the Twenty third of the Board of Studies in Biotechnology held on **10.10.2020**
RESOLVED that the minutes of the Twenty third meeting of Board of Studies in Biotechnology has been considered
- 24.2 To consider the revised Syllabi of 7th semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2018 – 2019 under Regulation 2018 (CBCS). (Annexure-I)
RESOLVED that the revised syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018 – 2019 under Regulation 2018 (CBCS). (Annexure-I)
- 24.3 To consider the revised Syllabi of 5th semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2019 – 2020 under Regulation 2018 (CBCS). (Annexure-II)
RESOLVED that the revised syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2019 – 2020 under Regulation 2018 (CBCS). (Annexure-II)
- 24.4 To consider the revised Syllabi of 3rd semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2020 – 2021 under Regulation 2018 (CBCS). (Annexure-III)

RESOLVED that the revised syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2020 – 2021 under Regulation 2018 (CBCS). (Annexure-III)

24.5 To consider the revised syllabi of I Semester B.Tech Biotechnology to be offered for the batch of students to be admitted in 2021-2022 under Regulation 2018 (Annexure-IV)

RESOLVED that the revised syllabi of I Semester B.Tech Biotechnology to be offered for the batch of students to be admitted in 2021-2022 under Regulation 2018 (Annexure-IV)

24.6 To consider the panel of Examiners for the purpose of Evaluation (Annexure-V)

RESOLVED that the list of Examiners for practical Examinations, Project work and central evaluation be approved (Annexure -V)

Date: 01.04.21

N. G. Ramesh Babu
Signature of the Chairman 01/04/21

**Chairman, Board of Studies
Faculty of Biotechnology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635130
Krishnagiri (DT), Tamilnadu.**

Department of Biotechnology – 24thBOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
VII	718BTT01	DOWNSTREAMPROCESSING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Recrystallization • Adiabatic Drying
VII	718BTT02	PLANTBIOTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Concept of cellular totipotency</i> • <i>Viruses mediated gene transfer, status and expression of transferred genes</i> • <i>Molecular Pharming</i>
VII	718BTT04	GENOMICSANDPROTEOMICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Sequence complexity- Introns, Exons, Intron-Exon boundary;</i> • <i>Genome diversity: Bacteria, Archae and eukaryotes.</i> • <i>pooling strategies, WGS(Whole Genome Sequencing)</i> • <i>structure Global expresion profiling</i> • <i>Introduction, traditional approaches to expression profiling,</i> • <i>Analysis of RNA expression,</i> • <i>applications of genome analysis and genomics.</i>
VII	718BTT03	ANIMAL BIOTECHNOLOGY	The following topics are

			<p>included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>their applications in animal infections , High technology vaccines and gene therapy</i> • <i>Methods of transferring genes into animal oocytes, eggs, embryos and specific tissues by physical, chemical and biological methods</i> • <i>Biopharming– Transgenic animal technology,</i> • <i>application to production and therapeutics (mice, sheep, cattle)</i> • <i>Cellular reprogramming</i> • <i>Knockout mice and mice model for human genetic disorders.</i> • <i>Bio-reactors used for animal cell culture</i>
VII	718BTP07	DOWNSTREAM PROCESSING LAB	<p>The following topic is included in the existing syllabus,</p> <ul style="list-style-type: none"> • Product polishing – Spray drying
VII	718BTP08	PLANT BIOTECHNOLOGY LAB	<p>The following topic is included in the existing syllabus,</p> <ul style="list-style-type: none"> • Cell Suspension culture
VII	718BTP09	ENTREPRENEURSHIP DEVELOPMENT LAB	New course introduced
VII	718BTE01	CLINICAL RESEARCH AND DATABASE MANAGEMENT	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>regulatory affairs - GCP/ICH guidelines</i> • <i>Biostatistics and</i>

			<p><i>database managementsystem.</i></p> <ul style="list-style-type: none"> • <i>DRA(Drug regulatory affairs)- Process and Management of drug regulatory affairs in clinical trails.</i>
VII	718BTE03	BIO SIMILAR TECHNOLOGY	New course introduced
VII	718BTE04	RATIONAL DRUG DISCOVERY	New course introduced
VII	718BTE05	BIOTERRORISM AND NATIONAL SECURITY	New course introduced
VII	718BTE06	FUNDAMENTALS OF NANO BIOTECHNOLOGY	New course introduced
VII	718BTE07	CANCER BIOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>metastatic cascade,</i> • <i>basement membrane disruption, and three step theory of invasion,</i> • <i>proteinases and tumour cell invasion.</i> • <i>Immunotherapy,</i> • <i>CAR-T therapy ,</i> • <i>advances in cancer detection</i> • <i>Jak-STAT signaling,</i> • <i>Notch signaling and RasSignaling</i> • <i>Immunotherapy, CAR-T therapy , advances in cancer detection</i>
VII	718BTE08	DISASTER MANAGEMENT	<p>The following topics are included in the existing syllabus,</p>

			<ul style="list-style-type: none"> • <i>Relevance of indigenous knowledge, appropriate technology and local resources</i> • <i>, Risk Assessment, Response and Recovery Phases of Disaster – Disaster Damage Assessment.</i> • <i>Space Based Inputs for Disaster Mitigation</i> • <i>Management and field works</i> • <i>related to disaster management.</i>
VII	718BTE09	PROCESS EQUIPMENT AND PLANT DESIGN	New course introduced
VII	718BTE10	PRINCIPLES OF FOOD PROCESSING	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Edible coatings – Control of pH and water activity</i> • <i>Analysis of heavy metal, fungal toxins, pesticide and herbicide contamination in food</i>
Feedback obtained about curriculum & syllabus from stakeholders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			

N.G. Ranuh Lalor
 Signature of the Chairman 21/04/21

**Chairman, Board of Studies
 Faculty of Biotechnology (UG)
 Adiyamaan College of Engineering (Autonomous)
 Hosur - 635130
 Erishnagiri (DT), Tamilnadu.**

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR - 635 130
DEPARTMENT OF BIOTECHNOLOGY
TWENTY FOURTH MEETING OF BOARD OF STUDIES
MEMBERS PRESENT



TWENTY FOURTH BOS MEETING Held on 01-04-2021 at 10.00 am

N. G. Ramesh Babu

Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130

DEPARTMENT OF BIOTECHNOLOGY

TWENTY THIRD MEETING OF BOARD OF STUDIES

Held on 10-10-2020 at 2.00 pm.

MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. N.G.Ramesh Babu	Chairman, BOS/Biotechnology
2	Dr. V. Manivasagan,	Member, BOS/Biotechnology
3.	Dr. K. Saranya	Member, BOS/Biotechnology
4.	Dr.H.Vijaya Ragavan	Member, BOS/Biotechnology
5.	Dr.P.Balaji	Member, BOS/Biotechnology
6.	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert /HOD, BME, ACE
7.	Dr.K. Balakrishnan	University Nominee
8.	Dr.S. Renganathan	Academic Council Nominee
9.	Dr.C. Muthukumar	Academic Council Nominee
10	Dr.M. Shivaraj	Industry Representative
11	Mr. R. Asvinkumar	Alumini Representative

23.1	To consider the minutes of the twenty second meeting of the Board of Studies in Biotechnology held on 05-11-2019.
	RESOLVED that the minutes of the twenty second meeting of Board of Studies in Biotechnology held on 05-11-2019 has been considered
23.2	To consider the minutes of Board of Studies in Biotechnology held on 22-06-2020
	RESOLVED that the minutes of Board of Studies in Biotechnology held on 22-06-2020 has been considered
23.3	To consider the Syllabi of VII semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2017 – 18 under Regulation 2015 (CBCS) (Annexure -I)
	RESOLVED that the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015 be approved (Annexure-I)

23.4	To consider the Syllabi of V semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2018 – 19 under Regulation 2018 (CBCS). (Annexure -II)
	RESOLVED that the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018-2019 under Regulation 2018 be approved (Annexure-II)
23.5	To consider the Syllabi of III semester B. Tech. (Biotechnology) offered for the batch of students admitted in 2019 – 20 under Regulation 2018 (CBCS). (Annexure -III)
	RESOLVED that the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2019-2020 under Regulation 2018 be approved (Annexure-III)
23.6	To consider the Syllabi of VIII semester B. Tech. (Biotechnology) to be offered for the batch of students admitted in 2017 – 18 under Regulation 2015 (CBCS). (Annexure -IV)
	RESOLVED that the syllabi VIII Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2017-2018 under Regulation 2015 be approved (Annexure-IV)
23.7	To consider the Syllabi of VI semester B. Tech. (Biotechnology) to be offered for the batch of students admitted in 2018 – 19 under Regulation 2018 (CBCS). (Annexure -V)
	RESOLVED that the Syllabi of VI semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2029 under Regulation 2018 be approved (Annexure -V)
23.8	To consider the Syllabi of IV semester B. Tech. (Biotechnology) to be offered for the batch of students admitted in 2019 – 20 under Regulation 2018 (CBCS). (Annexure -VI)
	RESOLVED that the Syllabi of IV semester B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2020 under Regulation 2018 be approved (Annexure -VI)
23.9	To consider the Syllabi of II semester B. Tech. (Biotechnology) to be offered for the batch of students to be admitted in 2020 – 21 under Regulation 2018 (CBCS). (Annexure -VII)
	RESOLVED that the Syllabi of II semester B.Tech (Biotechnology) for the batch of students to be admitted in 2020-2021 under Regulation 2018 be approved (Annexure -VII)

23.10	To consider the panel of Examiners for the purpose of Evaluation. (Annexure -VIII)
	RESOLVED that the list of Examiners for practical Examinations, Project work and central evaluation be approved (Annexure -VIII)

Date: 10-10-2020

N. G. Ramakrishna Babu
Signature of the Chairman

Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous),
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.


Department of Biotechnology – 23rdBOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
V	518BTT01	BIOINFORMATICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • TCP/IP, • Telnet
V	518BTT02	GENETICENGINEERING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Chromosome engineering • Immunological techniques
V	518BTT03	BIOPROCESSENGINEERINGI	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Energetic analysis of microbial growth and product formation • Medium optimization
V	518BTT04	FUNDAMENTALS OFMASSTRANSFER	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • constant underflow staged processes • Concept of minimum, total and optimum reflux ratio
V	518BTT05	CHEMICALTHERMODYNAMICS&BIOTHERMODYNAMICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • calculation of equilibrium conversion and • yields for single and multiple reactions.

V	518BTP07	GENETIC ENGINEERING LAB	The following topics included in the existing syllabus, <ul style="list-style-type: none"> Purification of digested DNA- Gel Elution
V	518BTP08	BIOPROCESS ENGINEERING LAB I	The following topics included in the existing syllabus, <ul style="list-style-type: none"> Monod kinetics
V	518BTP09	CHEMICAL ENGINEERING LABORATORY FOR BIOTECHNOLOGISTS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> Drying Characteristics in Tray Dryer Pressure drop in flow through packed column Heat transfer characteristics in heat exchanger Horizontal Condenser
VI	618BTT01	PROTEIN ENGINEERING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> Chemical reactivity in relation to post-translational modifications Computer exercise on the above aspects
VI	618BTT02	CHEMICAL REACTION ENGINEERING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> <i>Basics of non ideal flow;</i> <i>RTD function and measurement,</i> <i>RTD in plug flow and mixed flow reactor,</i> <i>relation among E, F and C curve, conversion in non</i>

			<p><i>ideal flow, non-ideal flow models-</i></p> <ul style="list-style-type: none"> • <i>tank in series and dispersion models;</i> • <i>reactor performance with non-ideal flow.</i> • <i>Isothermal batch, flow, semi-batch reactors; performance equations for single reactors –</i> • <i>batch, plug flow and mixed flow reactors;</i> • <i>space time and space velocity; multiple reactor systems;</i> • <i>multiple reactions</i>
VI	618BTT03	BIOPROCESSENGINEERINGII	<p>The following topic is included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Ideal reactors and its characteristics</i>
VI	618BTT04	HEALTH&PHARMACEUTICALBIOTECHNOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>plant, marine and microorganisms</i> • <i>prodrugs</i>
VI	618BTT05	IMMUNOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Theory of clonal selection</i> • <i>Inflammation</i> • <i>Autoimmunity, Autoimmune disorders and their diagnosis</i>
VI	618BTP07	BIOPROCESSENGINEERINGLABII	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Operation of pH control and dissolved oxygen measurement</i>

VI	618BTP08	HEALTH&PHARMACEUTICALBIOTECHNOLOGYLAB	New course introduced
VI	618BTP09	IMMUNOLOGYLAB	The following topic is included in the existing syllabus, <ul style="list-style-type: none"> • Radial immune diffusion (RID)(<i>mancini method</i>)
VI	618BTP10	ANALYTICALTECHNIQUESINBIOTECHNOLOGYLAB	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • COD Analyser • DNA Hybridization
Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			


Signature of the Chairman
 Chairman, Board of Studies
 Faculty of Bio Technology (UG)
 Adhyamaan College of Engineering (Autonomous),
 Hosur - 635 109
 Krishnagiri (Dt), Tamil Nadu.

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130
DEPARTMENT OF BIOTECHNOLOGY
TWENTY SECOND MEETING OF BOARD OF STUDIES

Held on 05-11-2019 at 1.30 pm.

MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. N.G.Ramesh Babu	Chairman, BOS/Biotechnology
2	Dr. V. Manivasagan	Member, BOS/Biotechnology
3.	Dr. K. Saranya	Member, BOS/Biotechnology
4.	Dr.V.Venkatesham	Member, BOS/Biotechnology
5.	Dr.H.Vijaya Ragavan	Member, BOS/Biotechnology
6.	Dr.P.Balaji	Member, BOS/Biotechnology
7.	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert /HOD, BME, ACE
8.	Dr.Sridhar,	Academic Council Nominee
9.	Dr.M.Rajyalakshmi,	Academic Council Nominee
10	Dr.K.Sripad,	Industry Representative
11	Mr.Caral Dinesh,	Alumini Representative

- 22.1 To consider the minutes of the Twenty first meeting of the Board of Studies in Biotechnology held on **24-04-2019**
RESOLVED that the minutes of the Twenty first meeting of Board of Studies in Biotechnology has been considered
- 22.2 To consider the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2020 under Regulation 2015 (Annexure-I)
RESOLVED that the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2020 under Regulation 2015 be approved (Annexure-I)
- 22.3 To consider the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2021 under Regulation 2015 (Annexure-II)

RESOLVED that the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2021 under Regulation 2015 be approved (Annexure-II)

- 22.4 To consider the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018-2022 under Regulation 2018 (Annexure-III)

RESOLVED that the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018-2022 under Regulation 2015 be approved (Annexure-III)

- 22.5 To consider the Curriculum for II Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2023 under Regulation 2018

RESOLVED that the Curriculum for II Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2023 under Regulation 2018 be approved (Annexure-IV)

- 22.6 To discuss the Curriculum for B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2020 under Regulation 2018

RESOLVED that the Curriculum for B.Tech (Biotechnology) for the batch of students to be admitted in 2019-2020 under Regulation 2018 be approved

- 22.7 To consider the list of Examiners for practical Examinations, Project work and central evaluation.

RESOLVED that the list of Examiners for practical Examinations, Project work and central evaluation be approved

Date: 05.11.2019

N. G. Ramesh Babu
05/11/2019
Signature of the Chairman

**Chairman, Board of Studies
Faculty of Biotechnology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635130
Krishnagiri (DT), Tamilnadu,**

Department of Biotechnology – 22ndBOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
IV	418BTT02	MOLECULARBIOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>lac</i> and <i>trp</i> operon • Hierarchical levels of gene regulation
IV	418BTT03	STOICHIOMETRYANDPROCESS CALCULATIONS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Basic concepts involved in material balance calculations</i> • <i>stoichiometric equation</i> • stoichiometric ratio, stoichiometric proportion • Heat of mixing • Fluid flow phenomena reciprocating pumps
IV	418BTT04	FUNDEMENTALSOFUNIT OPERATIONS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Unit operations for solid-liquid separation</i> • <i>Centrifugation- settling of solids, centrifuges, scale-up of centrifugation, centrifugal filtration.</i> • <i>Heat transfer phenomena- thermodynamics & heat transfer</i> • <i>unsteady state conduction</i> • <i>2 dimensional conduction</i> • <i>Dimensional analysis, Dimensional numbers, Convection heat transfer coefficient</i> • <i>condensation phenomena, Film and drop wise condensation over tubes</i>
IV	418BTT05	ENZYMETECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Nomenclature</i> • catalysis, activator and inhibitors • coenzymes, isoenzymes • molecular weight determination • <i>Enzyme biosensors;</i> • <i>Definition and Main component of</i>

			<i>biosensor,</i> <ul style="list-style-type: none"> • <i>Advantages and disadvantages of enzyme biosensors,</i> • <i>Example of an Enzyme biosensor- Electrochemical Biosensor,</i> • <i>Blood Glucose Biosensor</i>
IV	418BT06	ENVIRONMENTAL BIOTECHNOLOGY	The following topics included in the existing syllabus, <ul style="list-style-type: none"> • Biogas plant digester.
IV	418BTP07	MOLECULAR BIOLOGY LAB	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Estimation of melting point (tm) of DNA</i> • <i>Determination of protein profile by SDS PAGE</i> • <i>Isolation of DNA from whole blood</i> • <i>Restriction enzyme digestion</i>
IV	418BTP08	INSTRUMENTAL METHODS OF ANALYSIS LAB	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Estimation of Al³⁺ by flourimetry • Estimation of SO₄ - by Nephelometer
IV	418BTP09	ENZYMETECHNOLOGY LAB	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Partial digestion of protein using enzyme- amylase, invertase, papain, pepsin</i> • <i>Quantitative analysis of enzyme- amylase, invertase, papain, pepsin</i>
Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			

N. G. Ramesh Babu

Signature of the Chairman

**Chairman, Board of Studies
Faculty of Bio Technology (UG)**

**Adhlyamaan College of Engineering (Autonomous),
Hosur - 635 109**

Krishnagiri (Dt), Tamil Nadu.

XXII²² Meeting of Board of Studies

[Faculty of Biotechnology] held on 05-11-2019

Members Present

Sl.No		NAME OF THE MEMBER	SIGNATURE
1	Chairman	Dr. N. G. RAMECH BABU	N. G. Ramech Babu
2	Academic Council Member	DR. D. SRIDHAR	D. Sridhar
3	Industry representative	DR. K. SRIPAD	K. Sripad
4	External Member	DR. H. Vijayaraghavan	H. Vijayaraghavan
5	Academic Council Member	Dr. M. Rajalakshmi	M. Rajalakshmi
6	Member	Dr. P. BAWAJI	P. Bawaji
7	Alumni representative	MR. CARAL DINESH R	R. Dinesh
8	member	Dr. V. Venkatesham	V. Venkatesham
9	Invited/visiting Expert	Dr. T. S. Udhaya Suriya	T. S. Udhaya Suriya
10	member	DR. V. MANIVASAGAN	V. Manivasagan
11	member	DR. K. SARANYA	K. Saranya
12			

N. G. Ramech Babu
 Chairman, Board of Studies

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130
DEPARTMENT OF BIOTECHNOLOGY
TWENTY FIRST MEETING OF BOARD OF STUDIES
Held on 24-04-2019 at 1.30 pm.
MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. N.G.Ramesh Babu	Chairman, BOS/Biotechnology
2	Dr. V. Manivasagan	Member, BOS/Biotechnology
3.	Dr. N. Saravanan	Member, BOS/Biotechnology
4.	Dr. K. Saranya	Member, BOS/Biotechnology
5.	Dr.V.Venkatesham,	Member, BOS/Biotechnology
6.	Dr.P.Balaji	Member, BOS/Biotechnology
7.	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert /HOD, BME, ACE
8.	Dr.V.Adaikkalam,	University Nominee
9.	Dr.Sridhar,	Academic Council Nominee
10	Dr.M.Rajyalakshmi,	Academic Council Nominee
11	Dr.K.Sripad,	Industry Representative
12.	Mr.Caral Dinesh,	Alumini Representative

- 21.1 To consider the minutes of the Twentieth meeting of the Board of Studies in Biotechnology held on **23-10-2018**
RESOLVED that the minutes of the Twentieth meeting of Board of Studies in Biotechnology has been considered
- 21.2 To consider the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015
RESOLVED that the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 be approved (Annexure-I)
- 21.3 To consider the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015
RESOLVED that the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015 be approved (Annexure-II)

21.4 To consider the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018-2019 under Regulation 2018

RESOLVED that the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2018-2019 under Regulation 2018 be approved (Annexure-III)

21.5 To consider the syllabi of I Semester B.Tech Biotechnology to be offered for the batch of students to be admitted in 2019-2020 under Regulation 2018 (Annexure-IV)

RESOLVED that the syllabi of I Semester B.Tech Biotechnology to be offered for the batch of students to be admitted in 2018-2019 under Regulation 2018 be approved (Annexure-IV)

Date: 24.04.19

N. G. Ramesh Babu

Signature of the Chairman

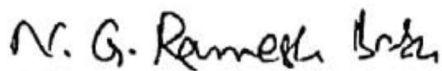
Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhyan College of Engineering (Autonomous),
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

Department of Biotechnology – 21th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
III	318BTT02	BIOCHEMISTRY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • deamination, • transamination
III	318BTT03	CELLBIOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>cancer, role of Ras and Raf in oncogenesis and apoptosis</i> • <i>Cell fractionation and flow cytometry and Localization of proteins in cells</i> • <i>Immunostaining.</i>
III	318BTT04	MICROBIOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Bacillus subtilis,</i> • <i>Clostridium botulinum</i> • broad spectrum antibiotics,
III	318BTT05	INSTRUMENTALMETHODSOFA ANALYSIS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Electrochemical cells- Electrode potential cell potentials</i> • <i>potentiometry- reference electrode – ion selective and molecular selective electrodes</i> • <i>Instrument for potentiometric studies – Voltametry – Cyclic and pulse voltametry-</i> • <i>Applications of voltametry . Study of surfaces</i>

			<ul style="list-style-type: none"> • <i>Scanning probe microscopes – AFM and STM.</i>
III	318BTT06	BASICINDUSTRIALBIOTECHNOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Process flow sheeting • block diagrams, pictorial representation
III	318BTP07	BIOCHEMISTRYLAB	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Estimation of DNA by Diphenylamine method • Enzymatic assay of phosphates
III	318BTP08	CELLBIOLOGYLAB	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Staining for different stages of mitosis in <i>Allium Cepa</i> (Onion)
III	318BTP09	MICROBIOLOGYLAB	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Quantification of Microbes: Sampling and Serial Dilution; Bacterial count in Soil – TVC • Effect of pH, Temperature, UV radiation on Growth Bacteria

Feedback obtained about curriculum & syllabus from stakeholders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded


Signature of the Chairman
 Chairman, Board of Studies
 Faculty of Bio Technology (UG)
 Adhyamaan College of Engineering (Autonomous),
 Hosur - 635 109
 Krishnagiri (Dt), Tamil Nadu.

XXI Meeting of Board of Studies

(Faculty of Biotechnology) held on 24-04-2019

Members Present

Sl. No		Name of the member	Signature
1.	Chairman	Dr. N.G. RAMESH BABU	N.G. Ramesh Babu
2.	Univ. nominee	Dr. V. Adarshakalann	V. Adarshakalann
3.	Industry representative	Dr. K. SRIPAD	K. Sripad
4.	Dr. D. Sri Dhar Academic Council member	Dr. D. SRIDHAR	D. R.
5.	Academic Council member	M. Rajya Lakshmi	M. Raj-Laxmi
6.	Alumni representative	R. CAROL DINESH	R. Carol Dinesh
7.	Member -	Dr. V. Venkatesham	V. Venkatesham
8.	member	P. BANSI	P. Bansi
9.	Intendenciam member	Dr. T. S. Udhaya Suriya	T. S. Udhaya Suriya
10.	member	Dr. V. Manivasagan	V. Manivasagan
11.	member	Dr. N. Saravanan	N. Saravanan
12.	member	Dr. K. BARNAYA	K. Barnaya

N.G. Ramesh Babu 24/4/19

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130
DEPARTMENT OF BIOTECHNOLOGY
TWENTIETH MEETING OF BOARD OF STUDIES
Held on 23-10-2018 at 1.30 pm.
MEMBERS PRESENT

Sl.No	Name	Category
1	Dr. N.G.Ramesh Babu	Chairman, BOS/Biotechnology
2	Dr. V. Manivasagan	Member, BOS/Biotechnology
3.	Dr. N. Saravanan	Member, BOS/Biotechnology
4.	Dr. K. Saranya	Member, BOS/Biotechnology
5.	Dr.V.Venkatesham,	Member, BOS/Biotechnology
6.	Dr.P.Balaji	Member, BOS/Biotechnology
7.	Dr.T.S.Udhaya Suriya	Inter-Disciplinary Expert
8.	Dr.V.Adaikkalam,	University Nominee
9.	Dr.Sridhar,	Academic Council Nominee
10	Dr.M.Rajyalakshmi,	Academic Council Nominee
11	Dr.K.Sripad,	Industry Representative
12.	Mr.Caral Dinesh,	Alumini Representative

20.1	To consider the minutes of the Nineteenth meeting of the Board of Studies in Biotechnology held on 10.04.2018
	RESOLVED that the minutes of the Nineteenth meeting of Board of Studies in Biotechnology has been considered
20.2	To consider the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015
	RESOLVED that the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015 be approved (Annexure-I)

20.3	To consider the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015
	RESOLVED that the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 be approved (Annexure-II)
20.4	To consider the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015
	RESOLVED that the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015 be approved (Annexure-III)
20.5	To consider the Curriculum for II Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2019 under Regulation 2018
	RESOLVED that the Curriculum for II Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2019 under Regulation 2018 be approved (Annexure-IV)
20.6	To consider Continuous Assessment (CA) and End Assessment (EA) marks allotment as accorded by Chairman, Academic council, ACE, Hosur
	RESOLVED that the Continuous Assessment (CA) and End Assessment (EA) marks allotment as accorded by Chairman, Academic council, ACE, Hosur be approved

10
Date: 10.04.2018

N. G. Ramesh Babu 23/10/18
Signature of the Chairman
Chairman, Board of Studies
Faculty of Bio Technology (UC)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

Department of Biotechnology – 20th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
VIII	815BTT01	BIOETHICSANDIPR	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>The legal and socioeconomic impact of Biotechnology</i> • <i>Biosafety regulation and guidelines, r-DNA guidelines</i> • <i>Experimental protocol approvals-use of genetically modified organism and their release in environment special procedures for r-DNA based product production.</i>
VIII	815BTE01	TISSUEENGINEERING	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>ECM remodeling</i> • <i>Role Of Nanotechnology in prosthesis construction.</i> • <i>FACS Analysis</i> • <i>Gene Therapy Physiological Models, Tissue Engineered Therapies,</i> • <i>Product characterization,</i> • <i>Components,</i> • <i>Safety,</i> • <i>Efficacy</i>
VIII	815BTE02	DIGITALHEALTHCARE	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>microwave,</i> • <i>Mobile health</i>
VIII	815BTE03	MOLECULARPATHOGENESIS	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Host defense against pathogens,</i> • <i>clinical importance of understanding host defense,</i> • <i>components of the host surface defences systems like skin, mucosa, eye, mouth, respiratory tract,</i>

			<ul style="list-style-type: none"> • <i>virulence factors damaging the host tissues</i> • <i>modulation of immune response by vaccines, other immuno modulators</i>
VIII	815BTE04	BIOPROCESSECONOMICSANDPLANT DESIGN	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Modes of bioreactor operations.</i> • <i>Main components of the bioreactor and their functions.</i> • <i>Bioreactor scale-up based on constant power consumption per volume.</i> • <i>Piping and instrumentation; Materials of construction for bioprocess plants.</i> • <i>cGMP guidelines; Validation Safety.</i>
VIII	815BTE05	STEMCELLSINHEALTHCARE	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Definition, Classification, Sources and Properties</i> • <i>Types of stem cells: methods of isolation, study of stem cells and their viability IPSC, embryonic stem cells, cancer stem cells.</i> • <i>Preservations of Stem cells.</i> • <i>Definition, Classification, Sources and Properties – Types of stem cells: methods of isolation, study of stem cells and their viability IPSC, embryonic stem cells, cancer stem cells. –Preservations of Stem cells.</i> • <i>Hematopoietic SC - Basics, Development and Regulation, Clinical Application of HSC – Gene Therapy –stem cells, Clinical medicine, Induced</i>

			<i>pluripotent SC – History, Reprogramming factors & Mechanisms.</i>
VIII	815BTE06	PRINCIPLESOFMANAGEMENT	The following topic is included in the existing syllabus, <ul style="list-style-type: none"> • Leadership
VIII	815BTE07	BIOCHIPTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Classification and components of Biosensors</i> • <i>Advantages and limitations, biocatalysis based biosensors,</i> • <i>Types of enzyme electrodes.</i> • <i>Applications- Case studies: Glucose, urea and cholesterol biosensors;</i> • <i>Clark electrode, Implantable sensors for long-term monitoring;</i> • <i>Drug development and detection; Industrial on-line monitoring, Environmental monitoring;</i> • <i>Technological process control; veterinary, agriculture, Food quality control.</i>
VIII	815BTE08	AGRICULTURALBIOTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Construction material, • covering material and its characteristics, growth media, green house irrigation system. • Nutrient management.
VIII	815BTE09	MEDICALCODING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • <i>Usage of CPT Manuals,</i> • <i>Software usage, Examples of CPT Speciality Code Practice,</i> • <i>HCPCS Coding, Basic steps of HCPCS coding,</i>

			<ul style="list-style-type: none"> • <i>Differentiation of CPT and HCPCS Coding.</i>
VIII	815BTE10	COMPUTATIONALBIOLOGY	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • <i>Electron transport,</i> • <i>Interconnection of pathways, metabolic regulation</i>
<p>Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded</p>			

N. G. Ramesh Babu 23/10/18
Signature of the Chairman
 Chairman, Board of Studies
 Faculty of Bio Technology (UG)
 Adhiyamaan College of Engineering (Autonomous)
 Hosur - 635 109
 Krishnagiri (Dt), Tamil Nadu.

XX Meeting of Board of Studies

(Faculty of Biotechnology) held on 23.10.18

Members Present

S.NO		Name of the member	Signature
1.	chairman	Dr. N. G. RAMESH BABU	N.G. Ramesh Babu
2	University nominee	Dr. V. Adantekalann	V. Adantekalann
3	Industry representative	Dr. K. SRIPAD	K. Sripad
4	Academic Council Nominee	Dr. D. SRIDHAR	D. Sridhar
5	Academic Council nominee	Dr. M. Rajyalakshmi	M. Rajyalakshmi
6	Alumni Representative	R. CARAL DINESH	R. Caral Dinesh
7	Member	Dr. V. Venkatesham	V. Venkatesham
8	member	Dr. P. BACADI	P. Bacadi
9	Interdisciplinary expert	Dr. T.S. UDHAYA SURIYA	T.S. Udhaya Suriya
10	member	Dr. V. MANIVASAGAN	V. Manivasagan
11	member	Dr. N. SARAVANAN	N. Saravanan
12.	member	Dr. K. SARANYA	K. Saranya

N. G. Ramesh Babu 23/10/18

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 130
DEPARTMENT OF BIOTECHNOLOGY
NINETEENTH MEETING OF BOARD OF STUDIES
Held on 10.04.2018 at 1.30 pm
MEMBERS PRESENT

Sl.No	Name	Category
1	Dr.V.Manivasagan	Chairman, BOS/Biotechnology
2	Dr. N.G.Ramesh Babu	Member, BOS/Biotechnology
3.	Dr. N. Saravanan	Member, BOS/Biotechnology
4.	Dr. K. Saranya	Member, BOS/Biotechnology
5.	Dr.D.Vinoth Kumar	Member, BOS/Biotechnology
6.	Mr. S. Karthikeyan	Member, BOS/Biotechnology
7.	Dr.S.Meenakshisundaram	University Nominee
8.	Mr. B.L.Sreedhar	Expert from Industry
9.	Dr. S.G. Ramachandra	Expert from outside nominated by the academic council
10	Dr.S. Karunakaran	Expert from outside nominated by the academic council
11	Dr. T. S. Udhya Suriya	Inter-Disciplinary Expert
12.	Mr.R. Asvin Kumar	Alumini Representative

- 19.1 To consider the minutes of the Eighteenth meeting of the Board of Studies in Biotechnology held on **31.10.2017**
RESOLVED that the minutes of the Eighteenth meeting of Board of Studies in Biotechnology has been considered
- 19.2 To consider the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015
RESOLVED that the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015 be approved (Annexure-I)

- 19.3 To consider the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015
RESOLVED that the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 be approved (Annexure-II)
- 19.4 To consider the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015
RESOLVED that the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2017-2018 under Regulation 2015 be approved (Annexure-III)
- 19.5 To consider the Curriculum for I Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2019 under Regulation 2018
RESOLVED that the Curriculum for I Semester B.Tech (Biotechnology) for the batch of students to be admitted in 2018-2019 under Regulation 2018 be approved (Annexure-IV)
- 19.6 To consider the redefining of Program Educational Objectives (PEOs), Program specific outcome (PSOs) and program outcome (POs).

RESOLVED that the redefining of Programme Educational Objectives (PEOs), Programme specific outcome (PSOs) and programme outcome (POs). (Annexure-VI)

Date: 10.04.2018


Signature of the Chairman

Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

Department of Biotechnology –19th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
VII	715BTT01	ANIMALBIOTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • contact inhibition • Harvesting of products
VII	715BTT02	DOWNSTREAMPROCESSING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • bioaffinity and pseudo affinity chromatographic techniques
VII	715BTT03	CANCERBIOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Oncogenes/proto oncogene activity • Targeted Therapy in Cancer
VII	715BTT04	DISASTERMANAGEMENT	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Climate change- Dos and Don'ts during various types of Disasters • Early Warning System • Applications and case studies and field works
VII	715BTE01	CLINICALRESEARCHANDDATABASE MANAGEMENT	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • regulatory affairs - GCP/ICH guidelines • Biostatistics and database management system.
VII	715BTE02	TRANSPORTPHENOMENAINBIOPROCESS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • rheological models; • theories of transport properties of gases and liquids; • effect of pressure and temperature.
VII	715BTE03	MICROARRAYANDDRUGDESIGN	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Integrated biochip system, • Mega clone technology for fluid microarrays, • SERS

VII	715BTE04	PROCESSEQUIPMENTSANDPLANT DESIGN	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • drawing according to scale; • monoblock • multiplayer vessels
VII	715BTE05	PROCESS ECONOMICS ANDMANAGEMENTFORBIOTECHNOLOGY INDUSTRY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • elements of production control; forecasting; planning; • routing; scheduling; dispatching; • costs and costs control, inventory and inventory control.
VII	715BTE06	PROFESSIONALETHICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Senses of 'Engineering Ethics' • Risk Benefit Analysis
VII	715BTE07	CONCEPTSOFNUTRACEUTICALS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • nutritional assessment of carbohydrates, • proteins and fats, • recommended dietary intake
VII	715BTE08	MANAGEMENTOFBIOHAZARD MATERIALS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • preliminary hazard analysis (PHA), • hazard operability studies (HAZOP) • Ionizing radiation, • types, effects, monitoring instruments • control programs
VII	715BTE09	DEVELOPMENTALBIOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Establishment of body axes in mammals and birds. • Development of Microsporangium and • Megasporgium
VII	715BTE10	GENOMICSANDPROTEOMICS	The following topics are included in the existing syllabus,

			<ul style="list-style-type: none">• bacteria, yeast, Caenorhabditis, Homo sapiens• determining the functions of individual gene• Tryptic digestion of protein
Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			



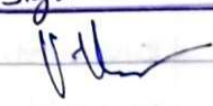





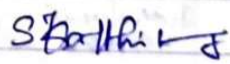
Signature of the Chairman

**Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.**

XIX meeting of Board of Studies

Faculty of Biotecnology held on 10-04-2018

Members present

C.NO		NAME OF THE MEMBER	Signature
1.	chairmen	Dr. V. Univasagan	
2.	Academic Council Nominee	Dr. S. KARUNAKARAN	
3.	Academic Council Nominee	DR. RAMACHANDRA S. G.	
4.	Alumni Representative	Mr. R. ASVIN KUMAR	R. Asvin
5.	Interdisciplinary expert	Dr. T. S. UDHAYA SURIYA	
6.	Member	Dr. N. SARAVANAN	
7.	Member	Dr. D. Vinodh Kumar	
8.	Member	Dr. K. SARANYA	K. Saranya
9.	Member	Dr. S. KARTHIKEYAN	
10.	Member	Dr. N. G. RANESH BABU	N. G. Ranesh Babu

ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR – 635 109
DEPARTMENT OF BIOTECHNOLOGY

EIGHTEENTH MEETING OF BOARD OF STUDIES MEETING

Held on 31.10.2017 at 2.00 pm

MEMBERS PRESENT

Sl.No	Name	Category
1	Dr.V.Manivasagan	Chairman, BOS/Biotechnology
2	Dr. N.G.Ramesh Babu	Member, BOS/Biotechnology
3.	Dr. N. Saravanan	Member, BOS/Biotechnology
4.	Dr. K. Saranya	Member, BOS/Biotechnology
5.	Dr.D.Vinoth Kumar	Member, BOS/Biotechnology
6.	Mr. S. Karthikeyan	Member, BOS/Biotechnology
7.	Dr.S.Meenakshisundaram	University Nominee
8.	Mr. B.L.Sreedhar	Expert from Industry
9.	Dr. S.G. Ramachandra	Expert from outside nominated by the academic council
10	Dr.S. Karunakaran	Expert from outside nominated by the academic council
11	Dr. T. S. Udhya Suriya	Inter-Disciplinary Expert
12.	Mr.R. Asvin Kumar	Alumini Representative

- 18.1 To consider the minutes of the seventeenth meeting of the Board of Studies in Biotechnology held on **24.03.2017**
RESOLVED that the minutes of the seventeenth meeting of Board of Studies in Biotechnology has been considered
- 18.2 To consider the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2014-2015 under Regulation 2011
RESOLVED that the syllabi of VIII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2014-2015 under Regulation 2011 (Annexure-I)

18.3 To consider the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015

RESOLVED that the syllabi of VI Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015 (Annexure-II)

18.4 To consider the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015

RESOLVED that the syllabi of IV Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 (Annexure-III)

18.5 To consider the Curriculum and syllabi for II Semester B.Tech (Biotechnology) for the batch of students admitted in 2017-2018 under Regulation 2015

RESOLVED that the Curriculum and syllabi for II Semester B.Tech (Biotechnology) for the batch of students admitted in 2017-2018 under Regulation 2015 (Annexure-IV)

18.6 To consider the curriculum of III to VIII semester for B.Tech (Biotechnology) for the batch of students admitted in 2015-2016 under Regulation 2015.

RESOLVED that curriculum of III to VIII semester for B.Tech (Biotechnology) for the batch of students admitted in 2015-2016 under Regulation 2015(Annexure-V)

18.7 To consider the redefining of Program Educational Objectives (PEOs), Program specific outcome (PSOs) and program outcome (POs).

RESOLVED that the redefining of Program Educational Objectives (PEOs), Program specific outcome (PSOs) and program outcome (POs). (Annexure-VI)

Date: 31.10.2017


Signature of the Chairman
Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

Department of Biotechnology – 18th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
VI	615BTT01	BIOINFORMATICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Elementary UNIX commands • SCOP and CATH • Bioinformatics approaches for drug discovery
VI	615BTT02	CHEMICALREACTIONENGINEERING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • constant volume batch reactor • reactor performance with non-ideal flow
VI	615BTT03	BIOPROCESSENGINEERING-II	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Regime analysis of bioreactor processes • Pichiapastoris/ Saccharomyces cereviseae
VI	615BTT04	HEALTH&PHARMACEUTICAL BIOTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Somatostalim • somatotropin • basic clinical evolution of new drugs
VI	615BTT05	PLANTBIOTECHNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Ti and Ri plasmids of <i>Agrobacterium</i> • climate change
VI	615BTP07	BIOPROCESSENGINEERING LABORATORY -II	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Algal cultivation • Residence time distribution- PFR
VI	615BTP08	PLANTBIOTECHNOLOGYLABORATORY	The following topic is included in the existing syllabus, <ul style="list-style-type: none"> • Meristem Culture for Virus-Free Plants





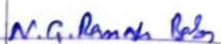

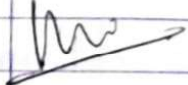
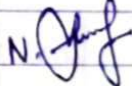
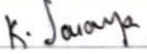
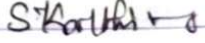

VI	615BTP09	TECHNICALSEMINAR	<p>The following topics are included in the existing syllabus,</p> <ul style="list-style-type: none"> • Biochips • Nanotechnology in medicine • Forensic science • Genetically modified organisms (Bt cotton and Btbrinjal etc.) • Bioinstrumentation • Biosensors • Upstream process Technology • Bioprocess Control & automation • Biomaterials • Protein engineering & inslico drug designs • Artificial organs
<p>Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded</p>			


Signature of the Chairman
 Chairman, Board of Studies
 Faculty of Bio Technology (UG)
 Adhiyamaan College of Engineering (Autonomous)
 Hosur - 635 109
 Krishnagiri (Dt), Tamil Nadu.

XVIII meeting of Board of Studies

Faculty of Biotechnology held on 31.10.2017



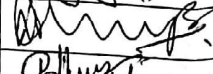
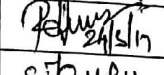
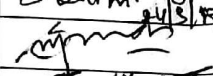

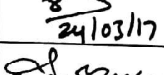
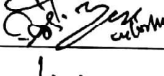
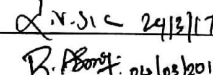
Members Present

SL. NO		NAME OF THE MEMBER	SIGNATURE
1.	Chairman	Dr. V. Manivasagan	
2.	Academic Council Nominee	DR. RAMACHANDRA. S.G.	
3.	Academic Council Nominee	Dr. S. KARUNA KARAN	
4.	Alumni Representative	MT. R ASVIN KUMAR	
5.	Member	DR. N. G. RAMESH BABU	
6.	Inter-Disciplinary Expert	Dr. T. S. UDHAYA SURIYA	
7.	Member	Dr. D. Vinothkumar	
8.	Member	DR. N. SARAVANAN	
9.	Member	Dr. K. SARANYA	
10.	Member	MT. S. BARTHIGEYAN	
11.	University nominee	Dr. S. Meenakshisundaram	

**ADHIYAMAAN COLLEGE OF ENGINEERING(AUTONOMOUS), HOSUR - 635 109
BOARD OF STUDIES IN FACULTY OF BIOTECHNOLOGY**

**MINUTES OF THE SEVENTEENTH MEETING OF BOARD OF STUDIES IN
FACULTY OF BIOTECHNOLOGY held on 24.03.2017 at 2.00 pm**

MEMBERS PRESENT

Sl.No	Name	Category	Signature with Date
1	Dr. V.Manivasagan	Chairman, BOS/Biotechnology	
2	Dr. N.G.Ramesh Babu	Member, BOS/Biotechnology	N. G. Ramesh Babu
3.	Dr. N. Saravanan	Member, BOS/Biotechnology	
4.	Dr.D.Vinoth Kumar	Member, BOS/Biotechnology	
5.	Mrs.R.Hemakalairani	Member, BOS/Biotechnology	
6.	Mr.S. Karthikeyan	Member, BOS/Biotechnology	S. Karthikeyan
7.	Dr.S.Meenakshisundaram	University Nominee	
8.	Mr. B.L.Sreedhar	Expert from Industry	
9.	Dr. S.G. Ramachandra	Expert from outside nominated by the academic council	
10	Dr.S. Karunakaran	Expert from outside nominated by the academic council	
11	Dr.K.V.Selvakumar	Inter-Disciplinary Expert	
12.	Mr.R. Asvin Kumar	Alumini Representative	R. Asvin Kumar 24/03/2017

17.1 To consider the minutes of the sixteenth meeting of the Board of Studies in Biotechnology held on **20.10.2016**

RESOLVED that the minutes of the sixteenth meeting of Board of Studies in Biotechnology has been considered

17.2 To consider the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2014-2015 under Regulation 2011 (Annexure-I)

RESOLVED that the syllabi of VII Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2014-2015 under Regulation 2011 (Annexure-I)

17.3 To consider the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015 (Annexure-II)

RESOLVED that the syllabi of V Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2015-2016 under Regulation 2015 (Annexure-II)

17.4 To consider the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 (Annexure-III)

RESOLVED that the syllabi of III Semester B.Tech Biotechnology to be offered for the batch of students admitted in 2016-2017 under Regulation 2015 (Annexure-III)


17.5 To consider the Curriculum and syllabi for I Semester B.Tech (Biotechnology) for the batch of students admitted in 2017-2018 under Regulation 2015 (Annexure-IV)

RESOLVED that the Curriculum and syllabi for I Semester B.Tech (Biotechnology) for the batch of students admitted in 2017-2018 under Regulation 2015 (Annexure-IV)

17.6 To consider the curriculum of III to VIII semester for B.Tech (Biotechnology) for the batch of students admitted in 2015-2016 under Regulation 2015(Annexure-V)

RESOLVED that curriculum of III to VIII semester for B.Tech (Biotechnology) for the batch of students admitted in 2015-2016 under Regulation 2015(Annexure-V)

Date: 24.03.2017



Signature of the Chairman

Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 635 109
Krishnagiri (Dt), Tamil Nadu.

Department of Biotechnology – 17th BOS recommendations

Sem	Course Code	Name of the Course	Remarks (New course introduced/contents incorporated in the corresponding course)
V	515BTT01	IMMUNOLOGY	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Autoimmune diseases and their mechanism • Immunization and vaccines, immunotechniques
V	515BTT02	GENETICENGINEERING	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Characteristics of cloning and vectors • Gene specific primer • Genetic analysis of quantitative traits using Statistics
V	515BTT03	BIOPROCESSENGINEERINGI	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Main parameters to be monitored and controlled in fermentation processes • Medium optimization • Thermodynamic efficiency of growth
V	515BTT04	FUNDAMENTALSOFMASS TRANSFER	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • HETP, HTU and NTU concepts • Industrial absorbers • Azeotropic distillation
V	515BTT05	CHEMICALTHERMODYNAMICS& BIOTHERMODYNAMICS	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Biothermodynamics • applications of excess properties of mixtures
V	515BTP07	IMMUNOLOGYLAB	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Isolation of peripheral blood mononuclear cells Identification of T cells by T cell resetting using sheep RBC. • Isolation of monocytes from blood
V	515BTP08	GENETICENGINEERINGLAB	The following topics are included in the

			existing syllabus, <ul style="list-style-type: none"> • DNA finger printing • DNA cloning
V	515BTP09	BIOPROCESSENGINEERINGLABI	The following topics are included in the existing syllabus, <ul style="list-style-type: none"> • Single cell protein (SCP) production by continuous culture • Medium optimization-Response surface methodology
Feedback obtained about curriculum & syllabus from stack holders (Faculty, Student, Parent, Alumni and Employer) were discussed and concluded			




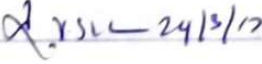




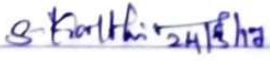


Signature of the Chairman

Chairman, Board of Studies
Faculty of Bio Technology (UG)
Adhiyamaan College of Engineering (Autonomous)
Hosur - 625 109
Krishnagiri (Dt), Tamil Nadu.

XVII, meeting of Board of Studies

Faculty of Biotechnology held on 24-03-2017

Members present

Sl. NO	Name of the member	Signature
1	Dr. V. Manivasagan	
2	DR. RAMACHANDRA. S.G.	 24/03/17
3	B.L. SREEDHAR	 24/03/17
4	Dr. K.V. Selvakumar	 24/3/17
5	Dr. S. Karunakaran	 24/3/17
6	ASVINKUMAR. R [ALUMINI REPRESENTATIVE]	
7	Hema Kalai Rani. R	 24/3/17
8	Dr. N.G. Ramach Babu	N.G. Ramach Babu
9	Dr. N. Saravanan	
10	S. Kirthikeyan	 24/3/17
11	S. Vinothkumar	 24/03
12	Dr. S. Meenakshisundaram	