



**KARPAGAM**  
ACADEMY OF HIGHER EDUCATION  
(Deemed to be University)  
(Established Under Section 3 of UGC Act, 1956)

# KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University)

(Established Under Section 3 of UGC Act, 1956)

Pollachi Main Road, Eachanari Post, Coimbatore - 641 021, Tamilnadu, India.

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This is to certify that the enclosed pages (2 to 78) consist of the minutes of the meeting of the Board of Studies conducted during the year 2017 – 2018

|      |            |
|------|------------|
| Year | 2017 -2018 |
|------|------------|

**REGISTRAR**

**Karpagam Academy of Higher Education**  
(Deemed to be University Under Section 3 of UGC Act 1956)  
Pollachi Main Road, Eachanari Post,  
Coimbatore - 641 021.



ACADEMY OF HIGHER EDUCATION

(Deemed to be University)

(Established Under Section 3 of UGC Act, 1956)

**KARPAGAM ACADEMY OF HIGHER EDUCATION**  
(Deemed to be University, established under section 3 of UGC Act 1956)  
**DEPARTMENT OF BIOCHEMISTRY**

**BOARD OF STUDIES – 2017-2018**

Minutes of the meeting of the Board of Studies in **Biochemistry** held on **03.05.2017, 10.00 am** at **Department of Biochemistry department (UG Lab)**, Karpagam Academy of Higher Education.

**Members Present:**

1. Dr. K. Devaki (Chair person)
2. Dr. K. Poornima (Internal)
3. Dr. J. Anitha (Internal)
4. Dr. Sridhar Muthusami (Internal)
5. Dr. L. Hariprasath (Internal)
6. Dr. P. Rani (Academic Expert)
7. Dr. C. Arul Raj (Industrial Expert)

**Agenda: 1**

To consider and approve the Regulations and Syllabus for **UG and PG Biochemistry** programmes.

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for **UG and PG Biochemistry**, programme and it comes into effect from 2017-18 (Approved changes in the syllabus is given in Annexure-I).

**Agenda: 2**

To consider and approve the Syllabus for Research Programmes in **Part I Biochemistry (M. Phil and Ph. D)**.

**Resolution: 2**

Resolved to approve Part I Syllabus for Research Programmes in **Biochemistry (M. Phil and Ph. D)** and it comes into effect from 2017-18 (Approved changes in the syllabus is given in Annexure-II).

| Change in the syllabi (%)  |    |             |
|--|----|-------------|
| UG   | PG | M.Phil/Ph.D |
| 25%  | 4% | 4%          |
| <p>The total number of course in the <b>UG programme Biochemistry</b> consists 60 courses (excluding languages). Total percentage of changes done = <math>1597/64 = 25\%</math></p> <p>The total number of course in the <b>PG programme Biochemistry</b> contains 27 courses. Total percentage of changes done = <math>112/27 = 4\%</math>.</p> <p><b>M.phil /Ph.D Biochemistry:</b> One course made minor changes. Total percentage of changes done = <math>30/8 = 4\%</math>.</p> |    |             |

## ANNEXURE – 1

### B.Sc., Biochemistry

- **In Semester I, Cell biology (17BCU102)**, the topic Mechanism of vesicular transport in Unit III was removed as it is dealt in **Membrane Biology and Bioenergetics (17BCU103)** course. Instead, N and O-linked glycosylation and protein folding topics were added in Unit II to compensate the weightage of the course.
- **In Semester II, Human Physiology practical (16BCU213)**, the experiments like “Separation of plasma protein” (No. 4) and “Separation of isoenzymes by electrophoresis” (No. 7) were changed as Group experiments due to time constraint.
- **In Semester III, Tools and Techniques in Biochemistry (17BCU304A)**, Unit I: Inclusion of topic such as Quality concepts, personal protective equipment. General safety – biological safety, chemical safety and fire safety. Principles of GLP: Test Facility Organization and Personnel, Test systems, Test and Reference Items, Standard Operating Procedures. Unit II: Inclusion of Quantitative transfer to samples, proper technique to use a volumetric pipette, volumetric flask. Unit III: Inclusion of measurement of pH, buffer solutions, pH indicator and pH scale. Unit IV: Inclusion of Centrifugation techniques: Principles and techniques of preparative and analytical centrifuge. Unit V: Inclusion of new topics “Virtual lab objectives, salient features, the role of virtual laboratories in science. Virtual lab for immunological techniques”.
- **17BCU314 A Tools and techniques in Biochemistry-Practical**, Conversion of milli equivalent solution to milli molar equivalent solution (eg-KCl, MgSO<sub>4</sub>) was included.
- **In Semester IV, 17BCU411- Gene Organization, Replication and Repair Practical's**, the experiments were rearranged for easy execution of practicals.
- **In Semester V, 17BCU501A – Clinical Biochemistry**, in Unit IV, the topics like Serum enzymes in liver disease- Serum transaminases (SGOT and SGPT), and phosphatases; were elaborated under the topic “Liver function tests”. Similarly the topics “Renal function tests” was elaborated as “Introduction, clinical significance of GGT, LDH and creatine phosphokinase in kidney function”. In Unit V the topic “ECG” and “Tumour markers for diagnosing various cancers” were added.

- **In 17BCU511A – Clinical Biochemistry Practical** “Physical examination of urine” was added.
- **In Semester VI, Recombinant DNA Technology (16BCU601B)**, the course content (Theory and practical) were found to be the repetition of Genetic Engineering and Biotechnology (16BCU601-A). So the course is replaced with another course [**Research Methodology (17BCU601-B)**] from UGC approved list.
- **In Drug Biochemistry practical (17BCU613-A)**, the practicals like Handling of small experimental animals, Route of drug administration – Oral and parenteral were added.
- **Advanced cell biology (16BCU503B) and Advanced cell biology practical (16BCU513B) were substituted with Chemistry-I (17BCU504) and Chemistry I practical (17BCU514) respectively.**
- Fundamentals of nanotechnology (16BCU602B) and Fundamentals of nanotechnology practical (16BCU612B) were replaced with **Chemistry-II (17BCU603) and Chemistry II practical (17BCU613) respectively.**

### **M.Sc., Biochemistry**

1. Core elective-I **Plant Tissue Culture (17BCP105B)** is renamed as **Plant Biotechnology**.
2. Core elective- I **Biopharmacy (17BCP105C)** has been renamed as **Biopharmaceutics**.
3. Following corrections in Core elective II- **Genomics and Proteomics 17BCP205C** were made
  - i. Unit I subtitle was renamed as Genome analysis.
  - ii. In Unit III the topics gene structure and pseudo genes were removed.
  - iii. The topic, 2D gel electrophoresis was shifted from Unit V to Unit IV. Characterization of protein complexes-protein protein interactions, yeast two hybrid system and micro arrays and proteomics in drug discovery were shifted to Unit V to Unit IV.
  - iv. In Unit V general strategies immobilized pH gradients, sample preparation and isoelectric focusing second dimension PAGE, staining, transfer of proteins from 2D gels were removed.
4. **Clinical Biochemistry (17BCP302)** Unit III Clinical parameter was renamed as Clinical Pathology.
5. **Drug Biochemistry and Neurochemistry course (17BCP304)** was renamed as **Drug Biochemistry**.
6. A new course named, **Developmental Genetics** is added (**17BCP203**) instead of **Chemistry of Natural Products (16BCP303)** and the courses were shift accordingly from Semester II to Semester III.

## **ANNEXURE - II**

### **M.Phil/Ph.D BIOCHEMISTRY**

The following were the amended made in the **Paper I –Research methodology (17RBC101)**

- Unit I has to be replaced with Unit I of Bioinformatics (17RBI101). Unit II and III were merged and some of the subtopics in those units were removed.

### **M.Phil/Ph.D BIOINFORMATICS**

The following were the amended made in the **Special Paper III- BIOCHEMATICS (17RBI303)**

- In Unit-II Remove protein part, is removed and 2D-NMR and Mass Spectrometry were added. In Unit-III, macromolecular modeling is replaced with metabolomics with subtitles.

Minutes of the meeting of the **Board of Studies in Biotechnology** held on **May 04, 2017** at **10.00 am** in the **Department of Biotechnology, FASH** at Karpagam University.

**Members Present:**

1. **Dr. Prabu, G.R.,**  
Associate Professor & Head, Department of Biotechnology,  
Karpagam Academy of Higher Eductaion, Coimbatore – 641 021
2. **Dr. R. Usha,**  
Associate Professor, Department of Microbiology, FASH,  
Karpagam Academy of Higher Eductaion, Coimbatore – 641 021
3. **Dr. A. Sangilimuthu,**  
Department of Biotechnology, KAHE, Coimbatore – 641 021
4. **Dr. P. Rajiv,**  
Department of Biotechnology, KAHE, Coimbatore – 641 021
5. **Dr. A. Gnanamani,**  
Principal Scientist, Biological Material Laboratory,  
CSIR – Central Leather Research Institute, Adyar, Chennai
6. **Dr. A. Balamurugan,**  
Manager, Field Research & Product Promotion – Exports,  
Research & Development – Agri, T. Stanes Company Limited,  
8/23-24, Race Course Road, Coimbatore – 641 018

The Chairperson welcomed the members of the Board. Leave of absence granted to Dr. R. Thilagavathy. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

1. To consider and approve the Regulations and Syllabus for **UG (B.Sc., Biotechnology)** programme.

**Resolution: 1**

1. Resolved to amend the corrections/ modifications and approve the Regulations and Syllabus for **UG (B.Sc., Biotechnology)** programme and it comes into effect from **2017-18** (Approved Regulations and Syllabus given in **Annexure-I**).

**Agenda: 2**

1. To consider and approve the Regulations and Syllabus for **PG (M.Sc., Biotechnology)** programme.

**Resolution: 2**

1. Resolved to amend the corrections/ modifications and approve the Regulations and Syllabus for **PG (M.Sc., Biotechnology)** programme and it comes into effect from **2017-18** (Approved Regulations and Syllabus given in **Annexure-II**).

**Agenda: 3**

1. To consider and approve the Regulations and Syllabus for **M.Phil/Ph.D., Biotechnology** programme.

**Resolution: 3**

1. Resolved to approve the Regulations and Syllabus for **M.Phil/Ph.D., Biotechnology** programme and it comes into effect from **2017-18** (Approved Regulations and Syllabus given in **Annexure-III**).

## **I. B.Sc., Biotechnology – changes in the syllabus**

### **The following corrections and suggestions is included in B.Sc (Biotechnology) syllabus (2017-18)**

The expert members have suggested to re-order the following theory and practical subjects in third semester instead of sixth semester with respective change of subject code

In regard to the syllabus for **B.Sc., Biotechnology** programme for the academic year 2017-2018 and based on the feedbacks received from the faculty members, panel members have suggested the following suggestions and corrections to include in the syllabus.

Percentage of Change in syllabus 19.55 %.

The changes made in the syllabus will give better understanding in core subjects and to develop students with better skills.

Theory papers - I.P.R. Entrepreneurship, Bioethics & Biosafety (17BTU304A)  
Bio-analytical Tool (17BTU304B)

Practical papers - I.P.R. Entrepreneurship, Bioethics & Biosafety practical (17BTU314A)  
Bio-analytical Tool Practical (17BTU314B)

Similarly, the following subjects should be present in sixth semester instead of third semester with respective change of subject code

Theory papers - Molecular Diagnostics (17BTU601A),  
Biotechnology and Human Welfare (17BTU601B)

Practical papers - Molecular Diagnostics Practical (17BTU611A),  
Biotechnology and Human Welfare Practical (17BTU611B)

### **In Semester – I**

#### **In Biochemistry and Metabolism (17BTU101) theory paper -**

- Change of the Unit I topic into Introduction to macromolecules
- Re-ordering of the unit topics “Carbohydrates: Structure, Function and properties of Monosaccharides, Disaccharides and Polysaccharides. Bacterial cell wall polysaccharides, Glycoprotein’s and their biological functions” as Unit II.
- Re-ordering the units as follows: Unit V as Unit II, Unit II as Unit III, Unit III as Unit V.

#### **In Cell Biology (17BTU102) theory paper -**

- Re arrangement of Unit IV as Unit II, Unit II as Unit III, Unit III as Unit IV
- Change of Unit V topic as “Cell abnormalities”
- Change of unit III title as “Cell organelles”

#### **In Biochemistry and Metabolism practical (17BTU111):**

- Re-ordering the experiment no. 8 as 6; 6 as 7 and 7 as 8.

**In Cell Biology Practical (17BTU112) :**

- Reordering the experiment numbers – No. 5 to 1; 1 to 2; 2 to 3; 3 to 4; 7 to 5; 6 as 6; 8 as 7; 4 as 8<sup>th</sup> experiments.

**Semester – II****In General Microbiology (17BTU203):**

- Re-arrangement of units
- In Unit I, the topics “Distribution and characterization Prokaryotic and Eukaryotic cells, Morphology and cell structure of major groups of microorganisms eg. Bacteria, Algae, Fungi, Protozoa and Unique features of viruses” may be placed as separate unit as Unit II.

**In General Microbiology Practical (17BTU213):**

- The experiment No. 3 should be split into two and ordered as No. 1 and 2<sup>nd</sup> experiments.
- Rearrangement of experiment nos. 2 as 3; 1 as 4; 5 as 5; 4 as 6
- Inclusion of the word isolated microbes in experiment no. 4

**Semester – III****In Plant physiology (17BTU301):**

- Change of the topic “plant adaptation” into “Stress Physiology”.

**In Molecular Biology (17BTU302):**

- Re-ordering of units as follows – Unit IV as III; V as IV and III as V

**In re-ordered paper - I.P.R., ENTREPRENEURSHIP, BIOETHICS & BIOSAFETY (17BTU304A):**

- the topic “NABL and FSSAI” may be included in unit V

**Semester – IV****In Bioprocess technology (17BTU401):**

- Addition of the content – Types of fermentation – Submerged, Solid state in unit I
- In Unit V the topics “penicillin G and Microbial cell immobilization” may be removed.

**In Industrial Fermentation (17BTU404A):**

- Rearrangement of unit order as follows – Unit II to I; III to II; IV to III; and I to IV

**In Enzymology (17BTU404 B):**

- The order of the units may be rearranged as V to IV and IV to V

**Semester – V****In Plant Diversity I (17BTU501A):**

- Change of Unit V topic as Plant Diseases.

**In Basics of Forensic Science (17BTU501B):**

- topic „toxicology” may be removed from unit III



**In Plant Biotechnology (17BTU503A):**

- Addition of Drought, salinity, cold tolerant plants in Unit V

**In Animal Biotechnology (17BTU504A):**

- Addition of Zebra fish in unit III
- The topics “expression of bovine growth hormone, production of human proteins in milk and meat, animal diseases need help of biotechnology- foot and mouth disease, Coccidiosis, trypanosomiasis, theileriosis” may be removed from Unit IV.
- Removal repeated content - “transgenic animals: mouse, cow, sheep, fish, hen, human genetic engineering”

**In Plant Diversity I practical (17BTU511A):**

- In experiment 6, the algae and fungi may be removed.

**Semester – VI****In Environmental Biotechnology (17BTU602B):**

- The order of the units may be rearranged as follows – Unit II as I; III as II; IV as III; I as IV
- Change of unit III topic as “waste management”

**In Environmental Biotechnology practical (17BTU612B):**

- “Production of biofertilizers using waste” may be included as experiment no. 5

**In re-ordered paper - Biotechnology and Human Welfare (17BTU601B):**

- Modification of the unit content topic into DNA finger printing and its applications in human welfare, identification of origin-Paternity, crime” instead of “Solving violent crimes such as murder and rape, solving claims of paternity and theft etc.”

**In re-ordered paper - Molecular Diagnostics Practical (17BTU611A):**

- Inclusion of the topic “RAPD” in experiment no. 1

**In re-ordered paper - Biotechnology and Human Welfare practical (17BTU611B):**

- Experiment No. 1 may be changed as Fermentation - Protein/ enzymes/ alcohol.

**Annexure – II****M.Sc (Biotechnology)****The following corrections and suggestions is included in M.Sc (Biotechnology) syllabus (2017-18)**

The expert members have suggested to include the following aspects in the curriculum and syllabus by matching with the current need of improvement and also the syllabus of all India level competitive examinations.

In regard to the syllabus for **M.Sc., Biotechnology** programme for the academic year 2017-2018 (III, IV semesters) and for the academic year 2019-2020, panel members have suggested the following suggestions and corrections to include in the curriculum and syllabus.

## Semester – I

- Deletion of the repeated content - Biosynthesis and degradation of amino acids, peptides and proteins in Unit IV of the theory paper, Biochemistry (17BTP101)
- Microbiology (17BTP102) - In Unit I, the word “utilization” may be changed to “nutrition”.  
In Unit II, the topic “techniques of pure culture, maintenance and preservation and microbial growth study” may be removed. In Unit III, the topic “Isolation of pure culture” may be modified to Isolation of pure culture, maintenance and preservation”.
- Inclusion of the topic “FASSI” in Unit IV of the Food Biotechnology (17BTP104) subject.
- “Randomized block design” may be added in Unit V of the subject Bioinstrumentation and Biostatistics (17BTP105A).
- The title of Unit V “Application of Nanotechnology” has to be changed to “Nanotechnology and Environment” in Nano biotechnology (17BTP105B) theory.
- Addition of “Cell division (Mitosis/Meiosis)” experiment in Cell biology practical (17BTP111).
- “Growth curve” has to be modified as “Growth curve (bacteria and fungi)” and the topic “Isolation and identification of microbes” may be changed to “Isolation and identification of harmful microbes” in Microbiology and Food biotechnology Practical II (17BTP112).

## Semester – II

- Interchanging the unit order (Unit IV and V) in Fermentation technology (17BTP202).
- The topic MHC I and II complex may be included in Immunotechnology (17BTP204) theory.
- Inclusion of the experiment “determination of microbial contaminants” in Environmental Biotechnology Practical (17BTP212).

Percentage of Change in syllabus 50.5%

The refined syllabus is accordingly for students to prepare for the competitive exams (CSIR, NET)

## Annexure III

### M.Phil/Ph.D., Biotechnology programme

In regard to the syllabus for **M.Phil/Ph.D., Biotechnology** programme, **no corrections** have been suggested to include and also suggested to follow the previous year (2016-17) syllabus of **M.Phil/Ph.D., Biotechnology** programme for the academic year 2017-18.

The UG programme, B.Sc., Biotechnology consists of 65 courses, out of which four are language and general courses. There is a entire syllabi change as per the UGC guideline. Hence total change  $30/61 * 100 = 46.15\%$ .

The PG programme, M.Sc., Biotechnology consists of 28 courses. There is a syllabi change in five courses and hence total change  $10/28*100 = 50.5 \%$ .

The meeting came to an end with a vote of thanks by the Chair.

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COIMBATORE – 641 021

Minutes of the meeting of the Board of Studies in **Chemistry** held on 03-05-2017 at 10.30 am in the Department of Chemistry at Karpagam University.

Members Present:

1. Dr.S.Ravi, Professor & Head, Department of Chemistry, Karpagam Academy of Higher Education, Coimbatore.
2. Dr.A. Kathiresan, Department of Chemistry, Karpagam Academy of Higher Education, Coimbatore.
3. Dr.K.Shankar, Department of Chemistry(S & H), Karpagam Academy of Higher Education, Coimbatore.
4. Dr.A.Thangamani, Assistant Professor, Department of Chemistry, Karpagam Academy of Higher Education, Coimbatore.
5. Mrs. R.Sharmila Devi, Assistant Professor, Department of Chemistry, Karpagam Academy of Higher Education, Coimbatore.
6. Dr.K.J.Rajendra Prasad, Emeritus Professor, Department of Chemistry, Bharathiar University, Coimbatore
7. Mr.Siva Shanmugam, Polyhedron Laboratories(P) Lts., 49/12 4<sup>th</sup> Cross West, Ganapathy Nagar, Collectorate (P), Erode.

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Syllabus for B.Sc Chemistry programme.

**Resolution: 1**

Resolved to approve the Syllabus for B.Sc Chemistry programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).

**Agenda: 2**

To consider and approve the Syllabus for M.Sc Chemistry programme.

**Resolution: 2**

Resolved to approve the Syllabus for M.Sc Chemistry programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-II).

**Agenda: 3**

To consider adoption of the curriculum of M.Phil., & Ph.D Programme for Chemistry from the academic year 2018-19.

**Resolution: 3**

Resolved to approve the adoption of the curriculum of M.Phil., & Ph.D Programme for Chemistry from the academic year 2018-19 (Approved Regulations and Syllabus given in Annexure-III).

## Annexure- I

The following changes were made in B.Sc Chemistry Programme syllabus taking into consideration the employability, entrepreneurship and skill development into consideration.

1. A new course entitled “Introduction to Water Management” was included in the UG programme in the Third semester as self study paper for 4 credits.
2. As faculty feedback the following were added
  - a. In the course 16CHU102, Ostwald dilution law was added in Unit IV
3. Applications of computers in Chemistry (16CHU502B), Inorganic Materials of industrial Importance (16CHU503A), Analytical Methods in Chemistry (16CHU503B), Instrumental methods of chemical analysis (16CHU504A), Applications of computers in Chemistry- Practical (16CHU512B), Inorganic Materials of industrial Importance- Practical (16CHU513A), Analytical Methods in Chemistry- Practical (16CHU513B), Instrumental methods of chemical analysis-Practical (16CHU514A) were replaced by Mathematics I (17CHU501), Mathematics practical I (17CHU511), Physics I (17CHU502) and Physics I Practical (17CHU513).
4. Industrial Chemicals and Environment (16CHU602B), Green Chemistry(16CHU603A), Molecules of life(16CHU603B), Industrial Chemicals and Environment-Practical (16CHU612B), Green Chemistry practical (16CHU613A), Molecules of life practical (16CHU613B) were replaced by Mathematics II (17CHU601), Physics II (17CHU602), Mathematics II Practical (17CHU611) and Physics II Practical (17CHU612).

## Annexure II

The following changes were made in M.Sc Chemistry Programme syllabus

1. A new course entitled “Water Management” was included in the PG programme in the second semester as self study paper for 4 credits.
2.
  - a. A guidebook to mechanism in Organic Chemistry, by Peter Sykes, John Wiley & sons Inc. New York, 6<sup>th</sup> Edition, 1995. Was added as a text book in 16CHP101.
  - b. In 16CHP205B, in unit II, Validation of analytical methods: Precision, accuracy, robustness, quantification, linearity and range was added.
3. As suggested by the Academicians (Feedback report) the following changes were made
  - a. In the paper 16CHP102,
    - (i) Silicates and siloxanes has to be added in the first unit,
    - (ii) basic organometallic chemistry was added in Unit-II, and catalysis in III unit. Unit III was made Unit IV and Unit IV in the original paper was Removed
  - b. Basic Organometallic Chemistry: Concepts, Syntheses and Applications. Front Cover. B. D. Gupta. Universities Press, 2011 was added as a text book.
  - c. In 16CHP104,  
Banwell., Fundamentals of Molecular & Spectroscopy, . McGraw-Hill Education (India) Pvt Limited, 1994  
Was added as a reference book

- d. In 16CHP202, Gary L. Miessler, Paul J. Fischer and Donald A. Tarr, Inorganic Chemistry, Pearson, 2011 was included as a text book
4. As faculty feedback the following were added
  - a. In the course 16CHP103, Since ‘Group theory & dipole moment’ is discussed under IR spectroscopy it can be removed from the above paper.
  - b. In the course 16CHP201, Barton reaction was included in Unit IV.

### **M.Phil and Ph.D Programme**

There is no change in the M.Phil and Ph.D Programme syllabi.

### **UG Programme:**

The UG programme for B.Sc Chemistry consists of 65 courses out of which 3 are languages.

There is a syllabus change in 20 courses and hence total change =  $20/62 * 100 = 32.25 \%$

### **PG Programme**

The PG programme for M.Sc Chemistry consists of 29 courses. There is a syllabus change in 7 courses and hence total change =  $7/29 * 100 = 24.1\%$

The meeting came to an end with a vote of thanks by the Chair.

Minutes of the meeting of the Board of Studies in Commerce, UG and PG Courses of Commerce Department held on 5<sup>th</sup> May 2017 at 10.00 am pm in the Thiruvalluvar Hall at Karpagam University.

Members Present:

1. Dr.K.Kumuthadevi
2. Dr.K.Jothi
3. Dr.R.Velmurugan
4. Mrs.W.Saranya
5. Mrs. N.Sumathi
6. Dr.K. Uthayasuriyan
7. Mr.V.Vetrivel

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda : 1**

To consider and approve the Regulations and Syllabus for B.Com, B.Com (CA), B.Com (PA) and B.Com (BPS) programme.

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for B.Com, B.Com (CA), B.Com (PA), B.Com (BPS) programme and it comes into effect from 2018-19 (Approved Regulations and Syllabus given in Annexure-I).

**Agenda: 2**

To consider and approve the Regulations and Syllabus for M.Com (CA) programme.

**Resolution: 2**

Resolved to approve the Regulations and Syllabus for M.Com (CA) programme and it comes into effect from 2018-19 (Approved Regulations and Syllabus given in Annexure-II).

**Agenda: 3**

To consider and approve the Regulations and Syllabus for M.Phil.and Ph.D. programme.

**Resolution: 3**

Resolved to approve the Regulations and Syllabus for M.Phil..and Ph.D. programme and it comes into effect from 2018-19 (Approved Regulations and Syllabus given).

**Annexure I**

**B.Com - UG Programme**

- ❖ Introduced “Indirect Tax Law” in the fifth semester.

- ❖ All the courses were focused towards employment, entrepreneurship and skill development.

### **UG Programme:**

The UG programme of B.Com. consists of 44 courses out of which 8 are languages and value added courses. There is a syllabus change in 8 courses and hence total change =  $1/36 * 100 = 2.78\%$

### **B.Com. (CA) - UG Programme:**

- ❖ Introduced “Indirect Tax Law” in the fifth semester.
- ❖ All the courses were focused towards employment, entrepreneurship and skill development.  
The UG programme of B.Com. CA consists of 45 courses out of which 8 are languages and value added courses. There is a syllabus change in 8 courses and hence total change =  $1/37 * 100 = 2.70\%$

### **Bachelor of Commerce (Professional Accounting)**

The UG programme of B.Com. PA consists of 48 courses out of which 8 are languages and value-added courses. There is a syllabus change in 38 courses and hence total change =  $37/48 * 100 = 80.90\%$

#### **Semester I**

- ❖ Financial accounting course I, II, III, IV & V Units can be replaced
- ❖ Business law course I, II, III, IV & V can be replaced.
- ❖ Accounting Package Tally (Practical) can be removed.
- ❖ Business Communication course Units II, IV, V can be replaced.
- ❖ Business Law (Practical) can be removed.

#### **Semester II**

- ❖ Higher Financial Accounting course can be removed and Corporate Accounting Course can be added.
- ❖ SPSS (Statistical package Using SPSS) can be removed.
- ❖ Business Statistics Course can be added with mathematics and can be named as Business mathematics and statistics.

#### **Semester III**

- ❖ Corporate Accounting can be shifted to Second Semester and Cost accounting course can be introduced.
- ❖ Direct Taxation -I Course can be renamed as Income Tax Law and Practice.
- ❖ Principles of Auditing course can be removed and Auditing and Corporate Governance Course can be introduced.



- ❖ Management Information system course can be removed and Computerized Accounting system course can be introduced.
- ❖ Auditing and Corporate Governance (Practical) Course can be introduced.
- ❖ Computerized Accounting system (Practical) course can be introduced

#### Semester IV

- ❖ Advanced Corporate accounting can be removed and Research Methodology a new course can be introduced.
- ❖ Direct Taxation -II can be removed and Indirect taxation a new course can be introduced.
- ❖ Business organization and Office Management course can be removed and **Financial analysis and Reporting a new course can be introduced.**
- ❖ Company Law and Secretarial Practices Course can be removed and **excel for Business a new course can be introduced.**
- ❖ **Indirect Taxation (Practical) Course can be introduced**
- ❖ **Research Methodology (Practical) Course can be introduced**
- ❖ **Financial analysis and Reporting (Practical) Course can be introduced**

#### Semester V

- ❖ Research Methodology Course can be Shifted to IV Semester and **Company Law a new course can be introduced.**
- ❖ Banking and Insurance Course can be removed and **Management Accounting a new course can be added.**
- ❖ Research Methodology Course IV and V Unit can be replaced.
- ❖ Financial Markets, institutions and Financial Services Course can be removed and **Advanced Accounting a new course can be added.**
- ❖ Applied Cost Accounting can be removed and **Management and Organization Behavior a new course can be added.**
- ❖ Human Resource Management Elective Course can be removed and **Investment Management a New course can be added.**
- ❖ Principles of Marketing can be removed and **Marketing Management new course can be added.**
- ❖ Micro Economics Course can be Removed and **Business Economic a new course can be added.**
- ❖ Marketing Management (Practical) Course can be introduced
- ❖ Investment Management (Practical) Course can be introduced
- ❖ Business Economic (Practical) Course can be introduced
- ❖ Management and Organization Behavior (Practical) Course can be introduced

#### Semester VI

- ❖ Investment management Course can be Shifted to V Semester and **Banking Law and Practice a new course can be introduced.**
- ❖ Industrial relations and Labour law can be removed and **Insurance Law and Practice a new course can be added.**
- ❖ Entrepreneurship and Project Management can be removed and **Entrepreneurship a new course can be added**
- ❖ International Business course can be removed and **Personal selling and sales management a new course can be added.**
- ❖ Management Accounting Course can be Shifted to V semester and **Information system Control and Audit a new course can be added.**
- ❖ Retail Business Management Course can be removed and **Strategic management a new Course can be Added.**

- ❖ Banking Law and Practice (Practical) Course can be introduced
- ❖ Insurance Law and Practice (Practical) Course can be introduced
- ❖ Entrepreneurship (Practical) Course can be introduced
- ❖ Personal selling and sales management (Practical) Course can be introduced
- ❖ Information system Control and Audit (Practical) Course can be introduced
- ❖ Strategic management (Practical) Course can be introduced

**B.Com. (Business Process Services) - UG Programme:**

- ❖ The UG programme of (B. Com BPS) consists of 38 courses out of which 6 are languages and value-added courses. There are no changes in the syllabus

**Annexure : II**

**M.Com (CA) programme - PG Programme:**

The PG programme of M.Com. and M.Com. CA consists of 29 courses. There is a syllabus change in 1 course and hence total change =  $1 / 29 * 100 = 3.45\%$

**Annexure - III**

**M.Phil / Ph.D (Commerce) (2017 Batch)**

- ❖ No Changes in the Syllabi

The meeting came to an end with a vote of thanks by the Chair.

KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021

Minutes of the meeting of the Board of Studies in Management (UG & PG) held on 03/05/2017 at 10:00 am / ~~pm~~ in the MBA Director's Cabin at Karpagam Academy of Higher Education.

Members Present:

1. Dr. M. Nandhini
2. Dr. A. Dharmaraj
3. Dr. R. Karthikeyan
4. Dr. V. Krishnaveni
5. Mr. R. Muthukumar

The Chairperson welcomed the members of the Board. Leave of absence granted to Dr. M. Ashok Kumar & Dr. S. Mahalingam. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for MBA (General Management) programme.

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for MBA (General Management) programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).

**Agenda - 2**

To consider and approve the Regulations and Syllabus for **BBA** programme.

**Resolution: 2**

Resolved to approve the Regulations and Syllabus for **BBA** programme and it comes into effect from 2018-19. (Approved Regulations and Syllabus given in Annexure-II).

**Agenda: 3**

To consider and approve the Regulations and Syllabus for MPhil/Ph.D in Management Programme for the Academic year 2017 - 2018

**Resolution: 3**

Resolved to approve the Regulations and Syllabus for MPhil/Ph.D in Management Programme and it comes into effect from 2017 - 2018 (Approved Syllabus given in Annexure - III).

- In all the courses without changing the title of the course, substantial changes (20 to 30 percent change) have been made with respect to the content of the courses and all the

courses are considered as new courses. The courses considered to be new courses is **Entrepreneurial Finance (17MBAPE303A)**.

- All the courses were focused towards employability, entrepreneurship and skill development.

## Annexure - I

### I Semester

**Management Principles and Organizational Behavior (17MBAP101)** - Selective Perception can be included in Unit –IV, Sources of Conflict can be included in unit – V.

**Managerial Economics (17MBAP102)** - Techniques of managerial economics can be included in Unit –I. Types of production function can be included in unit – II. Balance of trade and balance of payment can be included in unit – IV.

**Accounting for Managers (17MBAP104)** - Cost concept for planning and control can be included in unit - II; Applications of cash can be included in unit – V.

### II Semester

**Operations Management(17MBAP201)**- Common manufacturing process can be included in unit – I, Routing in Unit II and Period Order Quantity can be included in unit – III.

**Marketing Management (17MBAP202)**- Factors influencing buyer behavior can be added in unit - I, Levels of Product in unit – III and Personal Selling in unit – IV.

**Human Resources Management (17MBAP203)**- Employee Satisfaction Survey Methods can be included in Unit I, Components of Executive compensation, Methods of Competency Mapping can be included in unit III.

**Banking and Insurance Management (17MBAP205)** - Recent trends in credit management can be included in unit - II, Bancassurance models to be included in unit – IV.

**Research Methodology for Management (17MBAP206)**-Research strategies can be included in unit I, Determination of sample size can be included in unit – II and writing an abstract can be included in unit -V.

### III Semester

**Strategic Business Management (17MBAP301)** - Porter's approach to industry analysis and Porter's competitive strategies to be included in unit-II, Requirement of effective evaluation, importance of evaluation, techniques of strategic evaluation and control can be included in unit – V.

**Entrepreneurship** - Factors affecting Entrepreneurship growth, Entrepreneurial Competencies, Constraints for the Growth of Entrepreneurial Culture to be included in unit-I, Entrepreneur training institutes at state and national level can be included in unit-III.

**Financial Services Management (17MBAPF303C)**-Problems faced by financial services sector in India to be included in Unit – I, Performance of Mutual Funds in India can be included in unit –II; Forfeiting in the Indian Scenario can be included in unit – III, Loan repayment schedule to be included in Unit – IV.

**Services Marketing (17MBAPM303A)**-Strategic planning process to be included in Unit – I, Postal services to be included in unit – III.

**Sales and Promotional Management (17MBAPM303B)** - Qualities of Sales Professionals to be included in Unit – I, Selection Process to be included in Unit – II, Functions of Advertising Agency can be included in Unit – III, Advertising in Electronic Media can be included in Unit-V.

**Human Resource Development (17MBAPH303A)** - Personality and group dynamics can be added under individual and group behavior and to be included in Unit – II, Potential appraisal can be included in Unit – III; Quality circle can be included in Unit – IV.

**Managing Interpersonal Effectiveness (17MBAPH303B)**- Effective letter writing and business mail can be included in unit – II. Causes of Anxiety can be included in unit – V.

**System analysis & Design (17MBAPS303A)**- Different forms of normalization can be included in unit – III, COCOMO model of testing can be included in Unit – IV, and recent trends in system security can be included in unit – V.

**Emerging Trends in Technology (17MBAPS303B)**- Dash Board Technology can be included in unit – III, Disaster Recovery management to be included in IV Unit.

**Entrepreneurial Finance (17MBAPE303A)**- Risk analysis – economic risk, industry risk, company risk, financial risk to be included in Unit – I, Factoring in the Indian Scenario can be included in Unit – III, Lease evaluation in lessee's and lessor's point of view can be included in unit – IV.

#### **Project Management (17MBAPE303C)**

- Identification of project opportunities to be included in Unit – I, Four fields mapping to be included in Unit – II, Logistic management can be included in unit – V.

### **IV Semester**

**Working Capital Management (17MBAPF401A)**- Issues in Cash management policies in India can be included in Unit - II, Forfeiting (export factoring) can be included in unit – III.

**Security Analysis and Portfolio Management (17MBAPF401B)**- Simple trading procedures can be included in unit – II.

**Retail Marketing (17MBAPM401B)** - Buyer Behaviour Process can be added in unit - I, Sales Promotion tools can be added in unit – III and Security Systems in unit – IV.

**Industrial Relations Industrial Relations (17MBAPH401A)** - Types of discipline and policy procedures with standing order format can be added on unit-II, Negotiation law can be added in unit-III, CLRA(Contract) act, Hygiene factors to be included in unit - IV, CLRA(Child Labour) ,Statutory forms can be included in unit – V.

**Training and Development (17MBAPH401B)** - The Topics related to learning can be shifted from Unit II to Unit I. Role play types can be added in Unit IV

**E-Commerce Technology and Management (17MBAPS401A)** - Recent Trends in I-way to be included in unit - II, Virtual Merchants to be included in unit – III and Technology solution to privacy can be included in unit – V.

**Software Project Management (17MBAPS401B)** - Project implementation and execution of MS office in SPM can be included in Unit II, Activities and characteristic of SPM can be included in Unit I.

**Business Plan and Ethics (17MBAPE401B)** - Risk analysis process to be included in unit – III and social auditing can be included in unit – V.

**Managing Diversity Managing Diversity (17MBAPE401C)**

- Impact of MNCs on host economies to be included in Unit - I, Multicultural and managing multicultural can be included in Unit - II, Entry mode can be included in the unit – III.

**Annexure-II**

No changes in the Syllabi of BBA Programme.

**Annexure-III**

No changes in the Syllabi of MPhil/Ph.D (Management) Programme.

Finally the members of the Board of Studies in Management authorized the chairperson to incorporate changes if necessary.

The meeting came to an end with a vote of thanks by the Chairperson.

The percentage of changes in UG programme BBA is 0%.

The percentage of changes in PG programme MBA is 1.66%.

The percentage of changes in M.Phil/Ph.D programme (Management) is 0%.

**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021**

Minutes of the meeting of the Board of Studies in Mathematics held on 03.05.17 at 10am in the Department of Mathematics at Karpagam Academy of Higher Education.

**Members Present:**

- |  |                 |
|--|-----------------|
| 1. Dr. M.M.Shanmugapriya,<br>Head (i/c),<br>Department of Mathematics,<br>Karpagam Academy of Higher Education,<br>Coimbatore – 21.                  | Chairperson     |
| 2. Dr. P.T. Hemamalini,<br>Professor & Head,<br>Department of Science and Humanities,<br>Karpagam Academy of Higher Education,<br>Coimbatore – 21.   | Member          |
| 3. Ms. M. Jannath Begam,<br>Assistant Professor,<br>Department of Mathematics,<br>Karpagam Academy of Higher Education,<br>Coimbatore – 21.          | Member          |
| 5. Dr. K. Kalidass,<br>Assistant Professor,<br>Department of Mathematics,<br>Karpagam Academy of Higher Education,<br>Coimbatore – 21.               | Member          |
| 6. Dr. R. Uthayakumar,<br>Professor,<br>Department of Mathematics,<br>The Gandhigram Rural Institute - Deemed University,<br>Gandhigram,<br>Dindigul | External Member |

The Chairperson welcomed the members of the Board. Leave of absence granted to V. Karthikeyan, Managing Director, Organic Fiber Clothing, Tirupur. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and modification in the existing Syllabus for UG Mathematics programme.

**Resolution: 1**

Resolved to approve the Regulations and modification in the existing Syllabus for UG Mathematics programme and it comes into effect from 2017-18. (Approved Regulations and Syllabus given in Annexure-I).

**Agenda: 2**

To consider and approve the Regulations and modification in the existing Syllabus for PG Mathematics programme.

**Resolution: 2**

Resolved to approve the Regulations and modification in the existing Syllabus for PG Mathematics programme and it comes into effect from 2017-18. (Approved Regulations and Syllabus given in Annexure-II).

**Agenda: 3**

To consider and approve the Regulations and modification in the existing Syllabus for Allied courses for B.Com, B.Com (CA), B.Com (CS), B.Com (BPS), B.Sc (ECS) handled by Department of Mathematics.

**Resolution: 3**

Resolved to approve the Regulations and modification in the existing Syllabus for Allied courses for B.Com, B.Com (CA), B.Com (CS), B.Com (BPS), B.Sc (ECS) handled by Department of Mathematics and it comes into effect from 2017-18.

**Agenda: 4**

To consider and approve the Regulations and Syllabus for the following Research programme for the Academic year 2017-2018.

- i) M.Phil in Mathematics and      ii) Ph.D in Mathematics

**Resolution: 4**

Resolved to approve the Regulations and Syllabus for i) M.Phil and ii) Ph.D Research programmes and it comes into effect from 2017-2018.



## UG Programme (B.Sc. Mathematics)

**For UG Courses the following suggestions were made based on the local and global needs and on employability, entrepreneurship and skill development.**

### 1. Calculus(16MMU101)

Unit – I : The topics ‘Concavity and inflection points , Asymptotes’ may be moved to the beginning of the Unit IV.

Unit – II: The first half of this unit can be moved as the second half and the second half as the first.

Unit – V: The topics‘Triple product’ is not relevant to any of the topics in this course syllabus.

### 2. Algebra (16MMU102)

Unit – I : In unit I basics of set theory can be included .

### 3. Real Analysis (16MMU103)

Unit – I : The topic ‘concept of cluster point and statement of Bolzano-Weierstrass theorem’ can be moved from unit I to unit IV.

Unit – IV: Since the topic related to sequences is already discussed in Unit II that can be removed from unit IV and sequences of functions can be included in Unit-V.

R3 can be included as text book and T1 may be excluded from text book and it may be included in reference.

### 4. Numerical Methods (16MMU301):

From Unit-I the topic “High speed computation algorithms” can be removed.

### 5. Logic and sets (16MMU304A):

The book “Bourbaki .N(2004),Theory of sets, Springer Pvt Ltd, Paris” can be included as Reference book (R1).

### 6. Analytical Geometry (16MMU504A):

In this course the reference book 4 (R4) can be included as text book 2 (T2).

### 7. Linear Programming (16MMU504B):

In this course from Unit – I formulation of LPP can be included. The following text book “Kanti Swarup and Gupta.R.K.,(2010). Operations Research, Sultan Chand & Sons, New Delhi” can be included as text book 2 (T2)..

### 8. Mechanics (16MMU601B):

The reference book 1 (R1) can be as text book 1 (T1) and vice versa.

### 9. Probability and Statistics (16MMU603A):

In unit-I the topic “Frequency distribution” can be included since it is the base for the rest of the topics.

### 10.

In the Fifth semester, the courses Physics-I and Physics-I-Practical may be included instead of the courses Number Theory and Computer Graphics respectively.

### 11.

In the Sixth semester, the courses Physics-II and Physics-II-Practical may be included instead of the courses Graph Theory and Mathematical Modeling respectively.

### 12.

Rearranging the courses logically between the semester in the curriculum.

The UG programme B.Sc Mathematics consists of 38 courses out of which 4 are languages and environmental studies courses. There is a syllabus change in 6 courses and **4 new courses were introduced.**

The percentage of changes in UG programme B.Sc. Mathematics is 13.38%

## **PG Programme (M.Sc Mathematics)**

**For PG Courses the following suggestions were made based on the local and global needs and on employability, entrepreneurship and skill development.**

- 1) **Fuzzy Logic** (16MMP106) :The text book 2 (T2) can be as T1 and T1 can be as reference book 3 (R3).
- 2) **Fundamentals of Actuarial Mathematics(16MMP205C)**  
Since the number of sessions allotted to the following units (Unit II, III and Unit V) is not sufficient to complete the unit, the topics mentioned below in each of these units can be eliminated.  
Unit-II :‘Commutation Functions  $D_x$ ,  $C_x$ ,  $M_x$  and  $R_x$  – Expressions for Present Values of Assurance Benefits in terms of Commutation Functions”.  
Unit-III : ‘Commutation Function  $S_x$  – Increasing Temporary Life Annuity – Tables of Life Annuity and Temporary Life Annuity ”.  
Unit-V : ‘Numerical Example : Retrospective Method and Comparison with Prospective Value – Derivative of Theoretical Expressions for Policy Value,  $tV_x$  by the Retrospective Method and Prospective Method”
- 3) **Functional Analysis(16MMP301)**:The reference book 1 (R1) can be made as text book 2 (T1) and vice versa
- 4) Rearranging of some course between the semester in the curriculum:
  - Interchanging the course “Magnetohydrodynamics” and “combinatorics “between semester I to semester III vice-versa
  - The course “Fuzzy Logic” can be moved from semester –I to semester –III
  - The course “Mechanics “ can be moved from semester II to semester –I
  - The course “Fluid Dynamics “ can be moved from semester III to semester –II.

The PG programme M.Sc Mathematics consists of 30 courses. There is a syllabus change in 1 course and hence total change =**1.03%**

## **Allied Courses**

- 1) **Business Mathematics and Statistics** (16CCU202) / (16CMU202)  
Unit- I : Since the number of sessions allotted to this unit is not sufficient to complete the unit, the topic ‘the nominal, effective rate of interest’ can be eliminated from unit one.
- 2) **Mathematics foundation for Electronics** (16ECU102)  
Since the allotted sessions are not sufficient to complete the syllabus, the advanced topics Diagonalization from Unit-I and the topic ‘Taylor and Laurent’s series’ from Unit-III can be removed.

## **M.Phil / Ph.D PROGRAMME**

The syllabus framed for 2016-2017 batch will be followed for 2017-2018 Batch.

The meeting came to an end with a vote of thanks by the Chair.

## **DEPARTMENT OF PHYSICS**

### **Minutes of the meeting of board of studies**

Minutes of the meeting of board of studies in Physics held on 06.05.2017 at 10.00 AM

Members Present:

1. Dr.V.Senthil Kumar
2. Dr B Janarthanan
3. Dr S Sharmila
4. MrsAmbiliVipin
5. Dr S Arumugam
6. Mr P Anbazhagan

The chair Person welcomed the members of the Board carefully scrutinized the draft syllabus/syllabi of the following courses:

1. B.Sc Physics
2. M.Sc Physics

and approved the same.

The copy of the syllabus/syllabi is/ are enclosed

The meeting came to an end with the vote of thanks by the Chair Person.

The following changes are made in the existing syllabus as per UGC (CBCS) pattern

#### **B.Sc Physics**

1. The course English (17ENU101) has been completely revised and changed.
2. Two topics in Unit I of Mathematical Physics II (17PHU203) have been changed.
3. Discipline Specific Elective Courses Digital, Analog Circuits and Instrumentation and Embedded System: Introduction to Microcontroller have been removed and Chemistry – I (17PHU503) has been introduced as a new course.
4. Classical Mechanics and Advanced Mathematical Physics have been removed and Mathematics – I (17PHU504) has been introduced.
5. Discipline Specific Elective Courses Digital, Analog Circuits and Instrumentation Practical and Embedded System: Introduction to Microcontroller practical have been removed and Chemistry Practical – I (17PHU513) has been introduced as a new course.

4. Classical Mechanics and Advanced Mathematical Physics have been removed and Mathematics Practical – I (17PHU514) has been introduced.

5. Instead of Electrical Circuits and Network Skills, Applied Optics, new course Chemistry – II (17PHU602) has been introduced. Instead of Quantum Mechanics and Atmospheric Physics, new course Mathematics – II (17PHU603) has been introduced.

6. Instead of Electrical Circuits and Network Skills Practical, Applied Optics Practical, new course Chemistry Practical – II (17PHU612) has been introduced. Instead of Quantum Mechanics Practical and Atmospheric Physics Practical, new course Mathematics Practical – II (17PHU613) has been introduced.

### **M.Sc Physics**

No Changes suggested for M.Sc Physics

Percentage of courses revised for UG programme = 19.14 %

Percentage of courses revised for PG programme = 0 %

### **M.Phil & Ph.D**

There is no change in the program.

Minutes of the meeting of the Board of Studies in **Automobile Engineering** held on 05/05/2017 at 10.00 am in UE 308 at Karpagam University.

Members Present:

1. Dr. V. M. Murugesan, Professor, Dept of Automobile Engineering, PSG College of Technology
2. Mr. A. V. Gowtham, Team Leader, R&D, Jayam Automotive, Coimbatore
3. Dr. K. K. Padmanabhan, Prof & Head, Dept of Automobile Engineering, Karpagam University
4. Dr. N. M. Sivaram, Associate Professor, Dept of Mechanical Engineering, Karpagam University
5. Dr. Debabrata Barik, Associate Professor, Dept of Mechanical Engineering, Karpagam University
6. Mr. R. Bharat Balaji, Assistant Professor, Dept of Automobile Engineering, Karpagam University
7. Mr. G. Jayabalaji, Assistant Professor, Dept of Automobile Engineering, Karpagam University

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for B.E Automobile Engg programme.

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for B.E Automobile Engg programme and it comes into effect from 2017-18.

The Minutes of the Meeting is given below

Minutes of 2017-2018 Curriculum and Syllabus

1. Engineering Mechanics Course has been included in the second semester.
2. Strength of Materials Course title has been changed to Mechanics of Solids.
3. Engineering Metrology and Measurement Techniques has been included in the third semester
4. Engineering Materials and Metallurgy has been converted from professional elective to Professional Core
5. Automation and Mechatronics/Intelligent vehicle Technology professional electives have been moved from fourth semester to fifth semester.
6. Automotive Electrical and Electronics Systems has been converted from professional elective to professional core.
7. Vehicle Dynamics has been moved from sixth semester to fifth semester
8. Syllabuses of Manufacturing Technology and Production Process for Automotive Components have been revised.
9. Industrial Engineering and Operations Research has been added in the sixth semester
10. Fuels and Lubricants, Engine and Vehicle Management Systems and Industrial Robotics have been included as Value added courses in fourth, sixth and seventh semester respectively.



# KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University Established Under Section 3 of UGC Act 1956) Pollachi

Main Road, Eachanari Post, Coimbatore - 641 021. INDIA

Minutes of meeting of the board of studies in BME department held on 06.05.2017 at 09.30 AM in the VLSI lab in FOE of Karpagam University

## Members present

1. Dr. SBhavani, Prof & HOD/ECE KAHE (Chairperson)
2. Dr. V.R.Vijayakumar, Prof & HOD/ECE, Anna University, Cbe
3. Mrs. N.Kavitha, steps knowledge service, Cbe
4. Dr. P.Manimegalai, Prof/ECE, KAHE
5. Dr. S.Kamalraj, Asst Prof/ECE, KAHE
6. Dr. G.R.Mahendrababu, APIECE, KAHE
7. Mr MDaranikumar, APIECE, KAHE

The Chairperson welcomed the members of the board of studies. The Bos committee scrutinized the drafted syllabus and the following resolutions were passed

## Agenda 1:

To consider and approve modification of curriculum and syllabus for B.E programme  
Resolution 1:

Resolved to modify curriculum and syllabus for BE - BME for academic year 2017-18 for BE Biomedical Engineering

## Agenda 2:

To consider and approve modification of existing curriculum for BE Biomedical Engineering for 2017-18.(Approved changes in syllabus are given in Annexure I).

## Resolution 2:

Resolved to modify the curriculum and syllabus for BME 2017

The meeting came to an end with vote of thanks by chairperson.

## Annexure I:

The following changes are made in the UG B.E Biomedical Engineering based on the local and global needs. Employability, Entrepreneurship and Skill Development aspects have been taken care off.

| Sl.No | Course Code | Course Name           | Changes Made                     |
|-------|-------------|-----------------------|----------------------------------|
| 1.    | 17BECC101   | English for Engineers | Changes has been made in units 2 |



|     |                            |  |  |
|-----|----------------------------|--|--|
| 2.  | 17BECCI02                  | Engineering Mathematics-I                                      | Changes has been made in units 2,3 and 5           |
| 3.  | <b>17BECC15 I</b>          | <b>Yoga</b>  | <b>New course Introduced</b>                       |
| 4.  | 17BECC20 IA/<br>17BECC20IB | Business Communication /<br>Technical English                  | Changes has been made in unit 2                    |
| 5.  | 17BECC202                  | Engineering Mathematics-II                                     | Changes has been made in unit I                    |
| 6.  | 17BEPH203/<br>17BECH203    | Engineering Physics/ Engineering chemistry                     | Changes has been made in units 1,3 and 4           |
| 7.  | 17BEBME205                 | Materials Science  | Changes has been made in unit 5                    |
| 8.  | <b>17BEBME213</b>          | <b>C Programming lab</b>                                       | <b>New course Introduced</b>                       |
| 9.  | <b>17BEBME251</b>          | <b>Business Plan</b>   | <b>New course Introduced</b>                       |
| 10. | 17BECC302                  | Digital Electronics  | Changes has been made in units 3 and 5             |
| 11. | 17BEBME304                 | Electronic Devices and Circuits                                | Changes has been made in unit 3                    |
| 12. | 17BEBME401                 | Probability and Bio-Statistics                                 | Changes has been made in units 1 and 2             |
| 13. | 17BEBME402                 | Linear Integrated Circuits                                     | Changes has been made in units 1 and 5             |
| 14. | <b>17BEBME412</b>          | <b>Scientific Computing lab</b>                                | <b>New course Introduced</b>                       |
| 15. | 17BEBME413                 | Linear Integrated Circuits Laboratory                          | Changes has been made in units I and 5             |
| 16. | <b>17BEBME452</b>          | <b>Healthcare Industrial Internship-I</b>                      | <b>New course Introduced</b>                       |
| 17. | 17BEBME502                 | Medical Instrumentation  | Changes has been made in unit I                    |
| 18. | <b>17BEBME5E--</b>         | <b>Professional Elective II</b>                                | <b>New Professional Elective course Introduced</b> |
| 19. | 17BEBME51 I                | Biosensors and Transducers Lab                                 | Changes has been made in experiments               |
| 20. | 17BEBME512                 | Biomedical Instrumentation & Signal Processing Lab             | Changes has been made in experiments               |
| 21. | <b>17BECC551</b>           | <b>Fundamentals of Marketing for Bio-Medical Entrepreneurs</b> | <b>New course Introduced</b>                       |
| 22. | <b>17BEBME602</b>          | <b>Bio Tech Prosthetic Equipments</b>                          | <b>New course Introduced</b>                       |
| 23. | 17BEBME603                 | Diagnostic and Therapeutic Equipment - I                       | Changes has been made in units 4 and 5             |
| 24. | <b>17BECC604</b>           | <b>Healthcare and Hospital Management</b>                      | <b>New course Introduced</b>                       |
| 25. | <b>17BEBME612</b>          | <b>Diagnostic and Therapeutic Equipments Lab</b>               | <b>New course Introduced</b>                       |
| 26. | <b>17BEBME652</b>          | <b>Healthcare Industrial Internship-II</b>                     | <b>New course Introduced</b>                       |

|     |            |   |                                  |
|-----|------------|---|----------------------------------|
| 27. | 17BEBME701 | Virtual Bioinstrumentation                | Changes has been made in units 2 |
| 28. | 17BEBME702 | Diagnostic and Therapeutic Equipment - II | New course Introduced            |
| 29. | 17BEBME711 | Virtual Bioinstrumentation Lab            | Changes has been made in units 2 |
| 30. | 17BEBME712 | Hospital Training                         | New course Introduced            |
| 31. | 17BEBME801 | Patient Monitoring System                 | New course Introduced            |

The UG program B.E. Biomedical Engineering consists of 70 Courses out of which 9 courses come under Skill Development, 57 courses come under Employability and 4 courses come under Entrepreneurship. The 13 new courses are added in syllabus 2017-2018.

The average percentage of change in syllabus for 2017-2018 is 24.28%

**KARPAGAM ACADEMY OF HIGHER EDUCATION**

*(Deemed to be University)*

*( Established Under Section 3 of UGC Act 1956)*

Pollachi Main Road, Eachanari Post, Coimbatore – 641 021.

Faculty of Engineering

DEPARTMENT OF CIVIL ENGINEERING

**Minutes of The Meeting of Board of Studies 2017-18**

Minutes of the meeting of be board of students Civil Engineering hold on 3.5.2017 at 10.00AM

**Members present**

1. Dr.N.Balasundaram, professor and Head

Department of Civil Engineering

Faculty of Engineering

Karpagam Academy of Higher Education, Coimbatore – 21

2. Dr.M.Natarajan, Professor

Department of Civil Engineering

Faculty of Engineering

Karpagam Academy of Higher Education, Coimbatore – 21

3. Mr.V.Venugopalan

Department of Civil Engineering

Faculty of Engineering

Karpagam Academy of Higher Education, Coimbatore – 21

4. Mrs.K.Rubini

Department of Civil Engineering

Faculty of Engineering

Karpagam Academy of Higher Education, Coimbatore – 21

5. Mr.V.Johnpaul

Department of civil engineering

Faculty of Engineering

Karpagam Academy of Higher Education, Coimbatore – 21

6. Dr.G.S.VenkataSubramanian

Consulting civil engineer

Chartered Civil Engineer and Approved Valuer

S.G.Structural Engineers

Coimbatore – 641038

7. Mrs.Srisanthi,Professor  
Coimbatore Institute of Technology  
Peelamedu, Coimbatore – 641014

### **Agenda**

Proposed curriculum and syllabi for the following courses

1. B.E- Civil Engineering

### **Note on Agenda**

Considering the employability, entrepreneurship and skill development the following changes were made

1. It is suggested that Building Materials and Geology can be combined with construction materials and equipments.
2. It is advised to offer the Irrigation Engineering paper as elective course.
3. To encourage the software knowledge of the students, the Structural Detailing and Drawing laboratory can be offered using CADD.
4. Estimation, Quantity Surveying and Valuation can be offered in practical course to improve the practical knowledge of the students.
5. To increase the weightage of curriculum, more number of electives can be offered.

### **Resolution**

As per the suggestions from the B.O.S members the following changes were made and passed.

1. Construction Materials, Equipments and Geology was introduced in third semester as choice based with Concrete Technology.
2. Irrigation Engineering course was offered as elective.
3. Building Services course was introduced as Choice Based professional core with Water Resources Engineering course.
4. Structural Detailing and Drawing laboratory was offered using software (i.e.) CADD.

5. Estimation, Quantity Surveying and Valuation was offered as practical course and necessary syllabus was framed.

6. Twelve number of professional electives was introduced for the academic year 2017-2018.

The UG Programme B.E-Civil Engineering consists of 66 courses out of which 21 courses are offered by other departments. There is a syllabus change in 7 courses and hence total change =  $\frac{7}{45} \times 100 = 15\%$

There is no change in Ph.D syllabus.

The meeting came to an end with a vote of thanks by the chair.

# **KARPAGAM ACADEMY OF HIGHER EDUCATION**

## **Meeting Minutes Board of Studies-2017**

Minutes of the meeting of the Board of Studies in Computer Science and Engineering held on 06.05.2017 at 10.00 am in the Department of Computer Science and Engineering at Karpagam Academy of Higher Education. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

### **Members Present:-**

1. Dr. R. Santhosh (Chair Person)

Faculty of engineering /KU

2. Dr. B. ArunKumar (Member)

Assistant Professor

Department Of CSE, KU

3. Mr.M.Vigneshwar (Member)

Assistant Professor

Department Of CSE, KU

4. Mr.T. Mohan Raj (Members)

Assistant Professor

Department of CSE ,KU

5. Mr.V.M.Ganesh (Members)

Associate Software Engineer.

Cognizant Technology Solution, Chennai

6. Dr.S. Gokaldas (Member)

Chairperson-Computer Science

Amrita University, Mysore Campus,

The chairperson welcomed the members of the board. The board carefully scrutinized the draft Syllabus/syllabi of the following courses.

The Curriculum and syllabi of 2017 based on choice Based Credit system.

B.E .Computer Science and Engineering

And approved the same with necessary modifications.

The copy of the approved, Syllabus/ syllabi is enclosed.

The meeting came to an end with vote of thanks by the chair person.

The following changes are suggested during BOS meeting.

**Agenda: 1**

1 To consider and approve the Regulations and Syllabus for B.E Computer Science and Engineering for the academic year 2017-18.

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for B.E Computer science and Engineering programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).

**Annexure I**

**For U.G Courses the following suggestions were given.**

For U.G B.E CSE the following changes were made.

**BE-CSE**

**The new courses introduced are:**

| S.No | Course Code | Course Name                                   |
|------|-------------|---|
| 1    | 17BECS113   | Computer Practices and Programming Laboratory |
| 2    | 17BECS7E05  | Devops  |

|   |            |                   |
|---|------------|-------------------|
| 3 | 17BECS8E05 | Digital Marketing |
|---|------------|-------------------|

The U.G Program B.E Computer Science and Engineering Consists of 74 courses. There is a change in the syllabus of 3 courses and hence the total change is  $3/74*100= 4.05\%$ .

**Agenda: II**

To consider and approve the Regulations and Syllabus for Ph.D programme in Computer Science and Engineering

**Resolution: II**

Total number of courses present during the year 2016-17 =21

Total Number of courses present during the year 2017-18=21

Percentage change in the syllabi =  $0/21*100= 0\%$

Resolved to approve the Regulations and Syllabus for Ph.D programme in Computer Science Engineering and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).





**KARPAGAM ACADEMY OF HIGHER EDUCATION**  
**COIMBATORE-641021**

**BOS (2017-2018)**

**Minutes of Board of Studies:**

Minutes of meeting of the board of studies in ECE department held on 06.05.2017 at 09.30 AM in the VLSI lab in FOE of Karpagam University

**Members present**

1. Dr S.Bhavani, Prof & HOD/ECE KAHE (Chairperson)
2. Dr V.R.Vijayakumar , Prof &HOD/ECE, Anna University, Cbe
3. Mrs N.Kavitha, steps knowledge service, Cbe
4. Dr P.Manimegalai, Prof/ECE, KAHE
5. Dr S.Kamalraj, Asst Prof/ECE, KAHE
6. Dr G.R.Mahendra babu, AP/ECE, KAHE
7. Mr M.Daranikumar , AP/ECE, KAHE

The Chairperson welcomed the members of the board of studies. The BoS committee scrutinized the drafted syllabus and the following resolutions were passed

**Agenda 1:**

To consider and approve modification of curriculum and syllabus for B.E Electronics and Communication Engineering

**Resolution 1:**

Resolved to modify curriculum and syllabus for BE Electronics and Communication Engineering for academic year 2017-18 (Approved changes in syllabus is given in **Annexure I**)

**Agenda 2:**

To consider and approve modification of curriculum and syllabus for B.E Biomedical Engineering

**Resolution 2:**

Resolved to modify curriculum and syllabus for BE Biomedical Engineering for academic year 2017-18. (Approved changes in syllabus is given in **Annexure II** )

| Sl. No | Course Code           | Course Name                                   | Changes Made                                    |
|--------|-----------------------|---|---|
| 1      | 17BECC101             | English for Engineers                         | Changes has been made in unit 2                 |
| 2      | 17BECC102             | Engineering Mathematics – I                   | Changes has been made in unit 2, 3 and 5        |
| 3      | 17BEPH103 / 17BECH103 | Engineering Physics / Engineering Chemistry   | Changes has been made in unit 1, 3 and 4        |
| 4      | 17BEEC104             | Basic Electrical Engineering                  | Changes has been made in 1 experiment           |
| 5      | 17BECC202             | Engineering Mathematics – II                  | Changes has been made in unit 1                 |
| 6      | 17BEPH203 / 17BECH203 | Engineering Physics / Engineering Chemistry   | Changes has been made in unit 1                 |
| 7      | 17BEEC313             | Digital Electronics Laboratory                | Changes has been made in 1 experiment           |
| 8      | 17BEEC402             | Signals and Systems                           | Changes has been made in unit 1 and 3           |
| 9      | 17BEEC404             | Communication Theory                          | Changes has been made in unit 3 and 4           |
| 10     | 17BEEC501             | Digital Signal Processing                     | Changes has been made in unit 1, 2 and 5        |
| 11     | 17BEEC502             | Digital Communication                         | Changes has been made in unit 5                 |
| 12     | 17BEEC513             | Microprocessor And Microcontroller Laboratory | Changes has been made in 1 experiment           |
| 13     | 17BEEC6E08            | Internet Of Things                            | Has been Included in the Syllabus as new course |
| 14     | 17BEEC612B            | Embedded System Design Laboratory             | Changes has been made in 6 experiments          |
| 15     | 17BEEC5E03            | Measurements And Instrumentation              | Changes has been made in unit 5                 |

|    |             |                         |   |
|----|-------------|-------------------------|---|
| 16 | 17BEEEC6E02 | Wireless Networks       | Has been Included in the Syllabus as new course |
| 17 | 17BEEEC6E03 | Satellite Communication | Changes has been made in unit 1, 2 and 5        |

## **Annexure II**

The meeting came to an end with vote of thanks by chairperson

The UG program BE- Electronics and Communication Engineering consists of 67 Courses in which 16.6 % syllabus change has been incorporated.

In Ph.D program in ECE for Academic year 2017-18 the total change in syllabus is 15.60 %

**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021**

03-05-2017

Minutes of the meeting of the Board of Studies in **2017-2018** held on **03-05-2017** at **10:30 am** / pm in the **EEE Department** at Karpagam Academy of Higher Education.

**Members Present:**

1. Dr. A. AMUDHA,  
PROFESSOR AND HEAD, EEE DEPARTMENT,  
FACULTY OF ENGINEERING,  
KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE.
2. Dr. S. POORANI,  
PROFESSOR , EEE DEPARTMENT,  
FACULTY OF ENGINEERING  
KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE.
3. Dr. P. MANIMEGALAI,  
PROFESSOR , DEPARTMENT OF ECE,  
FACULTY OF ENGINEERING,  
KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE.
4. Prof. K. BALACHANDER,  
ASSOCIATE PROFESSOR, EEE DEPARTMENT,  
FACULTY OF ENGINEERING,  
KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE.
5. Prof. T. RAMESH,  
ASSISTANT PROFESSOR, EEE DEPARTMENT,  
FACULTY OF ENGINEERING,  
KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE.
6. Dr. V. JAGATHESAN,  
ASSOCIATE PROFESSOR, EEE DEPARTMENT,  
KARUNYA UNIVERSITY, KARUNYA NAGAR, COIMBATORE.
7. Er. B. SHANMUGA SUNDRAM,  
PROJECTS- HEAD,  
M/S. STEPS KNOWLEDGE SERVICES PVT. LTD.  
“ SHRINIVAS”, ONDIPUDUR, COIMBATORE.

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft Curriculum / Syllabus/ Syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for following programme for BE (EEE) programme.

**Resolution: 1**

1. Resolved to modify the Curriculum and Syllabus for BE (EEE) programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).

The courses introduced are:

| <b>S.No.</b> | <b>Course Code</b> | <b>Course Name</b>                       |
|--------------|--------------------|--|
| 1            | 17BECC251          | Business Plan                            |
| 2            | 17BEEE314          | Course Oriented Project- I               |
| 3            | 17BEEE351          | Introduction to IoT                      |
| 4            | 17BEEE404          | Linear Integrated Circuits ( <b>HC</b> ) |
| 5            | 17BEEE414          | Course Oriented Project- II              |
| 6            | 17BEEE502          | Digital Logic Circuits                   |
| 7            | 17BEEE514          | Course Oriented Project- III             |
| 8            | 17BEEE602          | Power System Analysis( <b>HC</b> )       |
| 9            | 17BEEE613          | Course Oriented Project- IV              |

The electives introduced are:

| <b>S.No.</b> | <b>Course Code</b> | <b>Course Name</b>                 |
|--------------|--------------------|------------------------------------|
| 1            | 17BEEE5E12         | Sensor and Transducer              |
| 2            | 17BEEE6E05         | High Voltage Engineering           |
| 3            | 17BEEE5E07         | Data Structure and Algorithm       |
| 4            | 17BEEE6E12         | Power System Operation and Control |

The changes in the existing courses are:

| S.No. | Course Code | Course Name  | Changes Introduced                           |
|-------|-------------|--|--|
| 1     | 17BECC101   | English for Engineers                              | Unit I,Unit II ,Unit IV and Unit V changed   |
| 2     | 17BECC102   | Engineering Mathematics-I                          | Unit II,Unit III ,Unit IV and Unit V changed |
| 3     | 17BECC202   | Engineering Mathematics-II                         | Unit I,Unit II ,Unit III and Unit IV changed |
| 4     | 17BEEE304   | Electronic Devices and Circuits                    | Unit IV and Unit V changed                   |
| 5     | 17BEEE405A  | Basic Thermodynamics and Energy Conversion Devices | Unit III, Unit IV and Unit V changed         |
| 6     | 17BEEE412   | Scientific Computing Laboratory                    | 2 Experiments changed                        |
| 7     | 17BEEE611   | Micro Processor and Micro Controller Laboratory    | 1 Experiment changed                         |

**Agenda: 2**

To consider and approve the Regulations and Syllabus for Ph.D programme in Electrical and Electronics Engineering

**Resolution: 2**

Resolved to approve the Regulations and Syllabus for Ph.D programme in Electrical and Electronics Engineering and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure).There is no change in the syllabus.

The UG programme B.E. Electrical and Electronic Engineering Consists of 70 courses out of which 20 courses come under the category of Science and Humanities, Management and Allied Engineering courses. There is a syllabus change in 16 course and hence total change = 22%

The Ph.d programme consists of 23 courses out of which 01 courses come under the MBA department courses . There is a no syllabus change .

The meeting came to an end with a vote of thanks by the Chair.

**BOS (2017 - 2018)**

**Minutes of Board of Studies:**

Minutes of the meeting of the Board of Studies in Mechanical Engineering held on May 06, 2017 (Saturday) at 02.00 pm in UM 101, Office of the Dean, Faculty of Engineering at Karpagam Academy of Higher Education.

**Members Present:**

1. Dr.D.Lakshmanan, Dean, Faculty of Engineering, KAHE.
2. Dr.N.M.Sivaram, Dept. of Mechanical Engineering, KAHE.
3. Mr.Milon.D.Selvam, Dept. of Mechanical Engineering, KAHE.
4. Mr.S.Aravind, Dept. of Mechanical Engineering, KAHE.
5. Mr.J.Venkatesh, Senior Product Manager, ZF Wind Power Private Limited, Coimbatore – 641 659.
6. Dr.R.K.Suresh, Professor in Mechanical Engineering, Amrita Vishwa Vidyapeetham, Coimbatore – 641 112.

The chairperson welcomed the members of the board. The board carefully scrutinized the Draft syllabi and after detailed discussion the followed resolutions were passed

**Agenda 1**

To considered and approve modification of curriculum and syllabus for B.E Mechanical Engineering for the Academic Year 2017 – 18.

**Resolution 1:**

Resolved to modify curriculum and syllabus for B.E Mechanical Engineering for the Academic Year 2017 – 18 (Approved changes in syllabus is given in **Annexure I**).

**Annexure I:**

**For UG courses the following suggestions were given**

| Sl. No | Course Code | Course Name                            | Changes Made                    |
|--------|-------------|--|---------------------------------|
| 1      | 17BEME312   | Machine Drawing                        | Changes has been made in unit 5 |
| 2      | 17BEME405A  | Kinematics of Machinery                | Changes has been made in unit 4 |
| 3      | 17BEME552   | Geometrical Dimensioning and Tolerance | Changes has been made in Title  |



The UG programme BE Mechanical Engineering consists of 75 courses out of which 19 courses are in Science and Humanities and other allied engineering courses. The syllabus change is 3%.

### **Ph. D. Mechanical Engineering**

The Ph D Mechanical Engineering consists of 11 courses. The academic year 2016 – 17 curricula and syllabi will be followed in academic year 2017 – 18.

The meeting came to an end with a vote of thanks by the chair.

KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021

**Minutes of the meeting of Board of Studies 2017-18**

Minutes of the meeting of the Board of Studies of **Department of Biotechnology (B.Tech)** held on **09.05.2017** at **09:30 am** in the **Dean's office, Faculty of Engineering** at Karpagam Academy of Higher Education.

**Members Present:**

1. Dr. G.R. Prabu, Associate Professor, Dept. of Biotechnology, FASH, KU
2. Dr. K. Devaki, Associate Professor, Dept. of Biochemistry, FASH, KU
3. Ms. P. Esther Jemima, Asst Professor, Dept. of Biotechnology (B.Tech), FoE, KU
4. Ms. V. Vijayalakshmi, Asst Professor, Dept. of Biotechnology (B.Tech), FoE, KU
5. Mr. R. Vijay, Alumnus, Dept. of Biotechnology (B.Tech), FoE, KU

The Chairperson welcomed the members of the Board. Leave of absence granted to **Dr.R.Thilagavathi, Dr. K.M.Aravinthan & Dr. K. Ruckmani**. The Board carefully scrutinized the draft syllabus/ syllabi and after detailed discussion the following resolutions were passed.

**Agenda:1**

To consider and approve the modification of existing Curriculum and Syllabus for **B.Tech Biotechnology** Programme.

**Resolution: 1**

Resolved to amend the suggestions/ corrections and approve the Curriculum and Syllabus for **B.Tech Biotechnology** Programme and it comes into effect from 2017-18. (Approved Regulations and Syllabus given in **Annexure-I**).

## ANNEXURE - I

The following corrections and suggestions may be included in B.Tech (Biotechnology) syllabus (2017-18) on the local and global needs. Employability, Entrepreneurship and Skill development aspects have been taken care off.

| S.No. | Course Code | Course Name                        | Changes made                                       |
|-------|-------------|------------------------------------|--|
| 1.    | 17BTCC101   | English for Engineers              | Changes has been made in Unit 2                    |
| 2.    | 17BTPH103   | Engineering Physics                | Changes has been made in Unit 1                    |
| 3.    | 17BTCH103   | Engineering Chemistry              | Changes has been made in Unit 1, Unit 3 and Unit 4 |
| 4.    | 17BTBT104   | Introduction to Biotechnology      | Changes has been made in Unit 1 and Unit 5         |
| 5.    | 17BTBT112   | Engineering Workshop Practice      | New Course Introduced                              |
| 6.    | 17BTCC201A  | Business Communication             | Changes has been made in Unit 2                    |
| 7.    | 17BTBT205   | Biochemistry-I                     | Changes has been made in Unit 4 and Unit 5         |
| 8.    | 17BTBT213   | Biochemistry Laboratory            | Changes has been made                              |
| 9.    | 17BTBT302   | Cell Biology                       | Changes has been made in Unit 5                    |
| 10.   | 17BTBT303   | Microbiology                       | Changes has been made in Unit 3 and Unit 5         |
| 11.   | 17BTBT304   | Principles of Chemical Engineering | Changes has been made in Unit 2 and Unit 5         |
| 12.   | 17BTBT311   | Cell Biology Lab                   | Changes has been made                              |
| 13.   | 17BTBT312   | Microbiology Lab                   | Changes has been made                              |
| 14.   | 17BTBT403   | Instrumental Methods of analysis   | Changes has been made in Unit 2                    |
| 15.   | 17BTBT404   | Molecular Biology                  | Changes has been made in Unit 3, Unit 4 and Unit 5 |
| 16.   | 17BTBT406   | Biochemistry-II                    | Changes has been made in Unit 1, Unit 3 and Unit 4 |

|     |            |   |  |
|-----|------------|---|--|
| 17. | 17BTBT502  | Genetic Engineering                                   | Changes has been made in Unit 3 and Unit 4 |
| 18. | 17BTBT505A | Plant Biotechnology                                   | Changes has been made in Unit 3 and Unit 5 |
| 19. | 17BTBT512  | Molecular biology and genetic Engineering lab         | Changes has been made                      |
| 20. | 17BTBT513A | Bioinformatics lab                                    | Changes has been made                      |
| 21. | 17BTBT551  | Separation of Bioactive compounds from plant material | Changes has been made                      |
| 22. | 17BTBT611  | Immunology Lab  | Changes has been made                      |
| 23. | 17BTBT612B | Molecular Modelling lab                               | Changes has been made                      |
| 24. | 17BTBT711  | Downstream Processing Lab                             | Changes has been made                      |
| 25. | 17BTBT5E01 | Animal Biotechnology                                  | Changes has been made in Unit 3            |
| 26. | 17BTBT8E07 | IPR and ethical issues in biotechnology               | Changes has been made in Unit 5            |

### **Agenda: 2**

To consider and approve the curriculum and syllabus for the new programme **Ph.D. Biotechnology**

### **Resolution: 2**

Resolved to approve the Curriculum and Syllabus for **Ph.D. Biotechnology** Programme and it comes into effect from 2017-18.

The meeting came to an end with a vote of thanks by the Chair.

The UG programme B.Tech Biotechnology consists of 84 courses out of which 18 courses are in Science & Humanities, Management and other allied Engineering courses. 5 courses comes under Skill development, 64 courses comes under Employability, 15 courses comes under Entrepreneurship. The 27 new courses are added in the syllabus 2017-2018.

The average percentage of change in syllabus for 2017-2018 is 3.83%.

## **Karpagam Academy of Higher Education**

### **Department of Chemical Engineering**

#### **Board of Studies Meeting (2017 - 2018)**

Minutes of the meeting of the board of studies of Department of Chemical Engineering (B.Tech) held on 21.06.2017 at 09:30 a.m in the Dean's Office, Faculty of Engineering at Karpagam Academy of Higher Education.

#### Members Present:

1. Dr.D.Lakshmanan, Dean, FoE, KU
2. Dr.S.Ravi, Professor and Head, FASH, KU
3. Dr.R.Thilagavathi, Associate Professor and Head (i/c), Department of Biotechnology, FoE, KU
4. Mr.A.Sivanantham, Associate Professor, Department of Mechanical Engineering, FoE, KU
5. Ms.Deepika.M, Assistant Professor, Department of Chemical Engineering, FoE, KU
6. Dr.M.Thirumarimurugan, Professor and Head, Department of Chemical Engineering, Coimbatore Institute of Technology
7. Dr.Raj Kumar Rajagopal, Managing Director, Cellzyme Biotech India Pvt. Ltd.,

The Chairperson welcomed the members of the board. The board carefully scrutinized the draft syllabus/syllabi and after detailed discussion the following resolutions were passed.

#### **Agenda 1:**

To Consider and approve the modification of existing curriculum and syllabus for B.Tech Chemical Engineering Programme.

#### **Resolution 1:**

Resolved to amend the suggestions / corrections and approve the curriculum and syllabus for B.Tech Chemical Engineering Program and it comes into effect from 2017-2018.(Approved Regulations and Syllabus given in Annexure –I).

#### **ANNEXURE – I**

**The following corrections and suggestions may be included in B.Tech (Chemical Engineering) syllabus (2017-2018)**

1. The Syllabus of 17BTCE104 – Basic Chemical Engineering course has to be simplified. Unit I and IV can be combined and unit V can be removed. Unit II – Unit Operations can be elaborated into three units (New Course).
2. Elements of Mechanical Engineering course was removed.
3. Titles of each unit were included in the following courses: 17BTCE304, 17BTCE305, 17BTCE403, 17BTCE501, 17BTCE502. The included unit titles were approved.
4. 17BTCE213-Inclusion of a new course Physical Chemistry Laboratory in Semester II was approved.
5. 17BTCE302 – The name and syllabus of the course “Physical and Organic chemistry” has been modified to a new course Organic chemistry and the modified contents were approved.
6. 17BTCE303 – Changing of course name from Principles of stoichiometry to process calculations was approved. Unit II was removed and unit V –“Combustion” was added and it was approved.
7. 17BTCE313 – Changing of course from Machining Practice Laboratory to a new course Mechanical Operations Laboratory was approved and it was suggested to shift to IV Semester.
8. Combining of courses, 17BTCE402 and 17BTCE502 to Chemical Engineering thermodynamics (New Course) was suggested and the syllabus was approved.
9. 17BTCE404 –Process Instrumentation course was removed and inclusion of a new course “Process Organic Synthesis” was approved.
10. 17BTCE405 – Changing of course name from material science and strength of materials to Material Science and Engineering was approved. The Syllabus was altered and it was approved.
11. 17BTCE412-The Laboratory name was suggested to be changed from Chemical Technology to Technical analysis laboratory. Inclusion of Cement analysis and coal analysis, FTR experiments was suggested.
12. 17BTCE413- Strength of Materials and Metallurgy Laboratory was suggested to move to III Semester.
13. 17BTCE451-Value added course (Process Design and Simulation using Aspen/Hysis Software) can be removed.”Production of commercially valuable compounds” was suggested.
14. The course Mass Transfer –I was shifted from 17BTCE503 TO 17BTCE502 was approved.
15. 17BTCE503 – Inclusion of a new course chemical process plant safety and hazard analysis was approved.

16.17BTCE504 – Inclusion of a new course “Instrumental methods of analysis” was approved.

17. Professional electives II, IV, V were shifted to semester VI, VII and VIII and were approved.

18.17BTCE512 – Computational Methods in Chemical Engineering 17BTCE512 was shifted to 17BTCE711. Inclusion of a new course – Process Equipment design and drawing – I was approved.

19.17BTCE602 – “Mass Transfer – II”, Re-arrangements of units and contents were suggested.

20.17BTCE603 – The course Petroleum Refining and Petrochemicals was removed.

21.17BTCE604 – The Title of the course was suggested to change from Economics for Engineers to “Process Economics for Chemical Engineers”

22.17BTCE552- Shifting of the value added course Pipe stress Analysis (Includes CEASER II) from 17BTCE751 was approved.

23.17BTCE612- The name of the course – Process equipment design and drawing was changed into Process Equipment Design and Drawing - II and was approved

24.17BTCE651 – Objective and the content of the Mini Project were suggested to be altered.

25.17BTCE702 – Change of the course name from “Process dynamics and control” to Process Dynamics control and Instrumentation was suggested and the syllabus was recommended to be altered as a new course and was shifted to 17BTCE603

26.17BTCE711 – CAD and simulation Laboratory was removed and inclusion of computational methods in Chemical Engineering Laboratory as a new course was approved.

27.17BTCE801- The Course – Elements of Transport Phenomena was shifted to 17BTCE702 and the name of the course was suggested to be kept as “Transport Phenomena”.

28. Intended outcomes were included for every courses and it was approved.

29. Professional electives were revised and the syllabus was altered accordingly.

30. Inclusion of Course Oriented Project in the semesters III, IV and V with one credit was approved.

The meeting came to an end with a vote of thanks by the chair.

The UG programme B.Tech. Chemical Engineering consists of 67 courses out of which 24 courses are in Science and Humanities and other allied engineering and Management courses. There is a syllabus change in 25 courses and hence the total change is  $25/43 * 100 = 58.13\%$ .





**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021**

Minutes of the meeting of the Board of Studies in **Architecture** held on **09.03.2017** at **10.00**am / pm in the **Faculty of Architecture** at Karpagam Academy of Higher Education.

**Members:**

1. Ar.Kathiravan, Chairperson  
Dean i/c, Faculty of Architecture,  
Karpagam University,  
Coimbatore – 641 021.  
Ph.No:9994220005
2. Ar.Ramakrishnamoorthy, Internal Member – HoD  
Head of the Department, Faculty of Architecture,  
Karpagam University,  
Coimbatore – 641 021.  
Ph.No:9597800315
3. Ar.Vimal C, Associate Internal Member – Asso.Prof  
Professor, Karpagam  
University, Coimbatore  
– 641 021,  
Ph.No:9629426939
4. Ar.SakthiMurugan Rajendran Internal Member – Asso.Prof  
Associate Professor  
Karpagam University,  
Coimbatore – 641 021,  
Ph.No:9443241747
5. Ar.Meera Shree Raja Internal Member – Asst.Prof  
Assistant Professor  
Karpagam University,  
Coimbatore – 641 021,  
Ph.No:9629671380
6. Ar.Janani Internal Member – Asst.Prof  
Assistant Professor  
Karpagam University,  
Coimbatore – 641 021,  
Ph.No:9790471717
7. Dr.Harimohan Pillai External Member -Academic  
Former - Educational Board Member, CoA  
Aradhana, 151 – Priyadarsini Nagar  
P O Ayyanthole  
Thrissur – 680003, Kerala, India  
Ph.No: 9447188446

- |   |                                 |
|---|---------------------------------|
| <p>8. Ar.Bhuvanasundar.M<br/>Partner<br/>Sundar Sundaram Architects,<br/>ThirugnanaSampantham Road,<br/>Race Course, Coimbatore -1<br/>Ph.No:9843011995</p> | <p>External Member–Industry</p> |
| <p>9. Dr.Paul Varghese,<br/>X1/223, Kalkanara House, Railway Station Road,<br/>Irinjalakuda, Kerala – 680121<br/>Ph.No: 9446238770</p>                      | <p>External Member–Academic</p> |
| <p>10. Ar.Anjaneys<br/>Dreamzscapes,<br/>272 C, Cross Cut Road,<br/>Gandhipuram, Coimbatore – 641 012.<br/>Ph.No: 9942323639</p>                            | <p>External Member–Industry</p> |

**Absentee:** Dr. Hari Mohan Pillai was not Present to the Board due to his busy schedule and we hope he will support us with the resolutions passed on board.

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft Regulations and syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for **B. Arch** programme for the Academic year 2017-2018

Proposed course for the syllabi:

1. The **History of Architecture** course revised for all semesters
2. Art, craft and model making course topic has been revised as **Art, Model making and Presentation**
3. **Theory of Architecture – II** course added in the second semester
4. **Surveying, levelling and Site planning** course added as a Theory Subject in the third semester
5. Climate responsive Architecture I & II course has been consolidated to **Climate Responsive Architecture** and made as a theory subject in the Fourth semester
6. **Building Services, I & II** course made as a Studio subject
7. **Computer Application IV** course added in the Fifth Semester
8. **Building Services for special buildings** course added as an Elective Studio Subject in the Fifth semester
9. **Sustainable Architecture** course is added as a studio subject in the Sixth semester
10. **Practical Training** course has been consolidated to one semester (i.e. for seventh semester only)
11. Semester eight added with the list of course
12. Vaastu and Principles of Indian traditional Architecture added in the Eight semester as a Studio course
13. Professional Practice course has been subdivided to **Professional Practice I and Professional Practice II** in ninth and tenth semester respectively.
14. **Research methods and field studies** course added in the Ninth semester
15. **Dissertation** course added in the Ninth semester

**The change in syllabi is 4.0%**

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for **B. Arch** programme and it comes into effect from 2017-2018

The meeting came to an end with a vote of thanks by the Chair.

**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021**

Minutes of the meeting of the Board of Studies in **Architecture - M. Arch** held on **09.03.2017** at **10.00**am / pm in the **Faculty of Architecture** at Karpagam Academy of Higher Education. Members:

1. Ar.Kathiravan, Chairperson  
Dean i/c, Faculty of Architecture,  
Karpagam University,  
Coimbatore – 641 021.  
Ph.No:9994220005
  
2. Ar.Vimal C, Associate Internal Member – Asso.Prof  
Professor, Karpagam  
University, Coimbatore  
– 641 021,  
Ph.No:9629426939
  
3. Dr.Paul Varghese, External Member–Academic  
X1/223, Kaliankara House, Railway Station Road,  
Irinjalakuda, Kerala – 680121  
Ph.No: 9446238770
  
4. Ar.Balakrishnaa, Internal Member – Senior Prof  
Dreamzscapes,  
272 C, Cross Cut Road,  
Gandhipuram,  
Coimbatore – 641 012.  
Ph.No: 9942323639
  
5. Ar.Bhuvanasundar External Member–Industry  
Partner  
Sundar Sundaram Architects,  
ThirugnanaSampantham Road,  
Race Course, Coimbatore -1  
Ph.No:9843011995

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft Regulations and syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for **M. Arch** programme for the Academic year 2017-2018

The Following changes were made in M. Arch Syllabus:

**New courses Introduced:**

1. Research methodology – I
2. Design Research and Field Studies
3. Research Methodology – II
4. Documentation and Presentation

**The M. Arch Program has 20 courses in which 4 are new courses introduced. The Overall change of course is 24.3%**

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for **M. Arch** programme and it comes into effect from Academic year 2017-2018



**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE – 641 021**

Minutes of the meeting of the Board of Studies in **B. Design** held on **09.03.2017** at **11.45 AM** in the **Faculty of Architecture** at Karpagam Academy of Higher Education.

Members Present:

1. Ar.Kathiravan,  
Dean i/c, Faculty of Architecture,  
Karpagam University,  
Coimbatore – 641 021.  
Ph.No: 9994220005
2. Ar.Ranjitha  
Head of the Department, Faculty of Architecture,  
Karpagam University,  
Coimbatore – 641 021.  
Ph.No: 9965011122
3. Ar.Vimal C Associate  
Professor, Karpagam  
University, Coimbatore  
– 641 021, Ph.No:  
9629426939
4. Ar.Lingeshwaran  
Associate Professor  
Karpagam University,  
Coimbatore – 641 021,  
Ph.No: 8098736543
5. Ar.Kabilan Assistant  
Professor Karpagam  
University, Coimbatore  
– 641 021, Ph.No:  
9600428482
6. Ar.Sriviji  
Assistant Professor  
Karpagam University,  
Coimbatore – 641 021,  
Ph.No: 9786721215
7. Ar. Manimaran  
Maran Design,  
First Floor, #6 Second Street West,  
Om Ganesh Nagar Vadavalli ,  
Coimbatore-641041  
Ph.No: 9842850577



8. Ar. Dhilipkumar Somesh  
Chief Creative officer and Co founder ZVKY Design  
dhilipsomesh@gmail.com  
Ph No: 9739048747

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider and approve the Regulations and Syllabus for **B.Design** programme.

Changes made in B.Des Syllabus:

- Communicative english discontinued.
- Computer application deferred by a semester and MS software students were already familiar.
- Contemporary interiors deferred to a later semester for understanding interior works of doyens better.
- Human values discontinued as a subject.
- Art and craft was converted to Model making and more relevant to the subject.
- History of Interiors Space planning was moved to earlier semesters as a foundation subject.
- Fundamental of structures as a subject were moved and introduced teh learning of teh subject in Interior Constructions and materials.
- Furniture design was converted into a theory subject
- Interior services was introduced and Environmental Conrol was limited into one semester.
- Interior Project work was moved to introduce Working drawing and detailing to increase employability.
- Semester VI was converted to practical training and the Semester Seven was professional learning.

**The change in syllabi is 36.3%**

**Resolution: 1**

Resolved to approve the Regulations and Syllabus for **B.Des** programme and it comes into effect from 2017-18 (Approved Regulations and Syllabus given in Annexure-I).

The meeting came to an end with a vote of thanks by the Chair.



**FACULTY OF PHARMACY**  
**KARPAGAM ACADEMY OF HIGHER EDUCATION**

(Deemed to be University)  
(Established Under Section 3 of UGC Act 1956)  
COIMBATORE – 641021

Pollachi Main Road, Eachanari Post, Coimbatore – 641021, Tamilnadu, India.  
Phone: 0422-2980011-14, 6471113, 14 | Fax No: 0422 – 2980022-23 | Email: info@karpagam.com

**Minutes of Meeting of Board of Studies 2017 – 18 for B.Pharm Degree Course**

Minutes of the meeting of the Board of Studies in Pharmacy held on 04/05/2017 at 11.00 AM in the Faculty of Pharmacy at Karpagam Academy of Higher Education.

**Members Present:**

1. Dr. R. Sundaraganapathy, Dean, Faculty of Pharmacy, KAHE, Coimbatore.
2. Mr. K. Abdul Khayum, Dept. of Pharmacology, FOP, KAHE, Coimbatore.
3. Ms. G. Praveena, Dept. of Pharmacognosy, FOP, KAHE, Coimbatore.
5. Ms. K. Gayathri, Dept. of Pharmaceutics, FOP, KAHE, Coimbatore.
6. Dr. R.K. Janakiraman, Senior Executive, FR&D, Strides Shasun Pharmaceuticals Ltd., Puducherry.
7. Dr. R. Sambathkumar, Professor & Principal, J.K.K. Nattraja College of Pharmacy, B. Komarapalayam, Namakkal.

**Leave of Absence to the following members granted:**

1. Ms. K.N. Arathi, Dept. of Pharm. Chemistry, FOP, KAHE, Coimbatore.

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabus and after detailed discussion the following resolutions were passed.

**Agenda: 1**

To consider for adoption of curriculum of Pharmacy Council of India for B.Pharm & D.Pharm from the academic year 2017 – 18 (PCI approved Regulations, Course of study & Scheme of examination and Syllabus).

**Resolution: 1**

Resolved to approve the adoption of curriculum of Pharmacy Council of India for B.Pharm & D.Pharm from the academic year 2017 – 18 (Approved Regulations, Course of study & Scheme of examination and Syllabus given in Annexure-I).

### Minutes of Meeting:

- Dr. R. Sundaraganapathy, Dean, FOP briefed the framework of syllabus for the academic year 2016 – 17 to the members present in the BOS meeting. He also submitted the subject wise syllabus to the nominated members to make corrections based on the local and global needs, relating to employability, entrepreneurship and skill development.

The following changes are made in the existing syllabus

| S. No. | Course Name                               | Details of Change  |
|--------|---|--|
| 1.     | Anatomy and Physiology– I                 | <ol style="list-style-type: none"><li>1. Course name has been changed to Human Anatomy and Physiology – I</li><li>2. Included the following topics in Unit I – Tissue level of Organisation.</li><li>3. Excluded the following topics in Unit I – Human skeleton</li><li>4. Unit II is changed to integumentary system, skeletal and joints.</li><li>5. Unit III is changed to body fluids and blood and lymphatic system.</li><li>6. Unit IV is changed to peripheral nervous system and special senses.</li><li>7. Unit V is changed to cardiovascular system.</li></ol> |
| 2.     | Pharmaceutical Inorganic Chemistry-I      | <ol style="list-style-type: none"><li>1. Course name has been changed to Pharmaceutical Inorganic Chemistry.</li><li>2. Unit I is changed to Impurities in pharmaceutical substances.</li><li>3. Unit II is changed to acid, bases and buffers, electrolytes, and dental products.</li><li>4. Unit III is changed to gastrointestinal agents.</li><li>5. Unit IV is changed to miscellaneous compounds.</li><li>6. Unit V is changed to radiopharmaceuticals.</li></ol>  |
| 3.     | Pharmaceutical Organic Chemistry – I      | Pharmaceutical Organic Chemistry – I Course is removed and a new Course Pharmaceutical Analysis is included.   |
| 4.     | Biochemistry – I                          | Biochemistry-I Course is removed and a new Course Pharmaceutics – I is included.   |
| 5.     | Biostatistics & Computer Applications – I | Biostatistics & Computer Applications – I Course is removed and a new Course Communication Skills is included.   |
| 6.     | Anatomy and Physiology Laboratory – I     | <ol style="list-style-type: none"><li>1. Course name has been changed to Human Anatomy and Physiology – I Practical.</li><li>2. Included the following topics – Determination of Blood grouping, ESR, Heart rate, Pulse rate, BP.</li></ol>  |
| 7.     | Pharmaceutical Inorganic                  | 1. Course name has been changed to Pharmaceutical Inorganic  |

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|     | Chemistry Laboratory – I                             | <p>Chemistry Practical.</p> <p>2. Included the following topics – limit test for Iron, Heavy metals, lead, arsenic, Identification test for Magnesium hydroxide, ferrous sulphate, sodium bicarbonate, calcium gluconate, copper sulphate, Test for purity and preparation of potash alum and ferrous sulphate.</p> <p>3. Excluded the following topics – preparation of barium sulphate, magnesium sulphate, test for adsorption power of heavy kaolin and systematic qualitative analysis of unknown inorganic mixture.</p>   |
| 8.  | Pharmaceutical Organic Chemistry Laboratory – I      | Pharmaceutical Organic Chemistry Laboratory – I Course is removed and a new Course Pharmaceutical Analysis Practical is included.   |
| 9.  | Biochemistry Laboratory – I                          | Biochemistry-I Course is removed and a new Course Pharmaceutics – I Practical is included.  |
| 10. | Biostatistics & Computer Applications Laboratory – I | Biostatistics & Computer Applications – I Course is removed and a new Course Communication Skills Practical is included.  |
| 11. | Anatomy and Physiology– II                           | <p>1. Course name has been changed to Human Anatomy and Physiology – II</p> <p>2. Unit I is changed from urinary system to Nervous system.</p> <p>3. Unit II is changed from reproductive system to digestive system and energetics.</p> <p>4. Unit III is changed from endocrinology to respiratory system and urinary system.</p> <p>5. Unit IV is changed from nervous system to endocrine system.</p> <p>6. Unit V is changed from sense organs to reproductive system and introduction to genetics.</p>  |
| 12. | Pharmaceutical Inorganic Chemistry – II              | Pharmaceutical Inorganic Chemistry – II Course is removed and a new Course Pathophysiology is included.   |
| 13. | Pharmaceutical Organic Chemistry – II                | <p>1. Course name has been changed to Pharmaceutical Organic Chemistry – I.</p> <p>2. Unit I is changed from Benzene to classification, nomenclature and isomerism of organic compounds.</p> <p>3. Unit II is changed from Aryl Halides to alkanes, alkenes and conjugated dienes.</p> <p>4. Unit III is changed from Phenols and amines to alkyl halides and alcohols.</p> <p>5. Unit IV is changed from Types of reaction and factors influencing the reaction to carbonyl compounds.</p> <p>6. Unit V is changed from reactive intermediates to carboxylic acids and aliphatic amines.</p> |
| 14. | Biochemistry – II                                    | <p>1. Course name has been changed to Biochemistry.</p> <p>2. Unit I is changed from lipid metabolism to biomolecules and bioenergetics.</p> <p>3. Unit II is changed from amino acid metabolism to carbohydrate metabolism and biological oxidation.</p>   |

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|     |   | <p>4. Unit III is changed from nuclei acid metabolism to lipid metabolism and amino acid metabolism.</p> <p>5. Unit IV is changed from replication and protein synthesis to nucleic acid metabolism and genetic information transfer.</p> <p>6. Unit V is changed from clinical biochemistry to enzymes.</p>  |
| 15. | Biostatistics & Computer Applications – II            | <p>1. Course name has been changed to Computer Applications in Pharmacy.</p> <p>2. Unit I is changed from biostatistics to number system and concept of information systems and software.</p> <p>3. Unit II is changed from regression and correlation probabilities to web technologies.</p> <p>4. Unit III is changed from computer packages to application of computers in pharmacy.</p> <p>5. Unit IV is changed from introduction to computer networks to bioinformatics.</p> <p>6. Unit V is changed from computer graphics to computer as data analysis.</p> |
| 16. | Anatomy and Physiology Laboratory – II                | <p>1. Course name has been changed to Human Anatomy and Physiology – II Practical</p> <p>2. Included the following topics – endocrine system, demonstration of general neurological examination, positive and negative feedback mechanism, total blood count, determination of tidal volume and vital capacity, permanent slides of vital organs and gonads.</p> <p>3. Excluded the following topics – blood grouping, recording of human body temperature and BMI, BP, heart rate and pulse rate.</p>  |
| 17. | Pharmaceutical Inorganic Chemistry Laboratory – II    | This course is removed.   |
| 18. | Pharmaceutical Organic Chemistry Laboratory – II      | <p>1. Course name has been changed to Pharmaceutical Organic Chemistry – I Practical.</p> <p>2. Included the following topics – preparation of derivatives and confirmation of the unknown compound by m.p./b.p., construction of molecular models.</p>   |
| 19. | Biochemistry Laboratory – II                          | <p>1. Course name has been changed to Biochemistry Practical</p> <p>2. Included the following topics – qualitative analysis of carbohydrates, urine abnormal constituents, quantitative analysis of reducing sugars, identification test for proteins, determination of blood creatinine, blood sugar, Preparation of buffer solution.</p> <p>3. Excluded the following topics – Determination of serum triglycerides, effect of pH on salivary amylase.</p>  |
| 20. | Biostatistics & Computer Applications Laboratory – II | <p>1. Course name has been changed to Computer Applications in Pharmacy Practical</p> <p>2. Included the following topics – design questionnaire using word processing package, create a HTML webpage, retrieve</p>   |

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|     |   | <p>the information of drug using online tools, generating and printing a report, exporting tables, queries, forms and reports to web pages and XML pages.</p> <p>3. Excluded the following topics – computer operating system, simple programming.</p>  |
| 21. | Physical Pharmaceutics – I                                    | <p>1. Unit I is changed from history of pharmacy to solubility of drugs.</p> <p>2. Unit II is changed from diffusion to states of matter and physicochemical properties of drug molecules.</p> <p>3. Unit III is changed from colloidsto surface and interfacial phenomenon.</p> <p>4. Unit IV is changed from coarse dispersion to complexation and protein binding.</p> <p>5. Unit V is changed from micromeritics to pH, buffer and ionic solutions.</p>   |
| 22. | Pharmaceutical Analysis and Physical Chemistry – I            | This course is removed.   |
| 23. | Advanced Pharmaceutical Organic Chemistry – I                 | <p>1. Course name has been changed to Pharmaceutical Organic Chemistry – II</p> <p>2. Unit I is changed from polynuclear hydrocarbons to benzene and its derivatives.</p> <p>3. Unit II is changed from reactions of synthetic importance to phenols, aromatic amines and acids.</p> <p>4. Unit III is changed from study of name reactions to fat and oils.</p> <p>5. Unit IV is changed from heterocyclic compounds to polynuclear hydrocarbons.</p> <p>6. Unit V is changed from heterocyclic compounds to cycloalkanes.</p> |
| 24. | Pharmacy Practice and Pathophysiology – I                     | Pharmacy Practice and Pathophysiology – I Course is removed and a new Course Pharmaceutical Microbiology is included.   |
| 25. | Pharmaceutical Technology – I                                 | Pharmaceutical Technology – I Course is removed and a new Course Pharmaceutical Engineering is included.  |
| 26. | Social Pharmacy and Behavioural Science                       | . This course is removed.   |
| 27. | Physical Pharmaceutics Laboratory – I                         | <p>1. Course name has been changed to Physical Pharmaceutics – I Practical</p> <p>2. Included the following topics – determination of solubility, pKa, partition coefficient, surface tension, HLB number, Langmuir constant, CMC, stability constant.</p> <p>3. Excluded all the experiments.</p>  |
| 28. | Pharmaceutical Analysis and Physical Chemistry Laboratory – I | This course is removed.   |
| 29. | Advanced Pharmaceutical Organic Chemistry – I                 | 1. Course name has been changed to Pharmaceutical Organic Chemistry – II Practical  |

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|     |  | <p>2. Included the following topics – Recrystallization, steam distillation, determination of iodine value, preparation of compounds by reactions such as halogenation, nitration, oxidation, hydrolysis, diazotisation, Claisen Schmidt reaction, perkin reaction.</p> <p>3. Excluded the following topics – quantitative determination of organic compounds, preparation of heterocyclic compounds.</p> |
| 30. | Pharmacy Practice and Pathophysiology Laboratory – I           | Pharmacy Practice and Pathophysiology Laboratory– I Course is removed and a new Course Pharmaceutical Microbiology Practical is included.   |
| 31. | Communication Skills   | This course is removed.   |
| 32. | Physical Pharmaceutics – II                                    | <p>1. Unit I is changed from kinetics to colloidal dispersion.</p> <p>2. Unit II is changed from interfacial phenomenon to rheology.</p> <p>3. Unit III is changed from rheology to coarse dispersion.</p> <p>4. Unit IV is changed from pH, buffer and isotonic solutions to micromeritics.</p> <p>5. Unit V is changed from complexation to drug stability.</p>   |
| 33. | Pharmaceutical Analysis and Physical Chemistry – II            | Pharmaceutical Analysis and Physical Chemistry – IICourse is removed and a new Course Pharmaceutical Organic Chemistry – III is included.   |
| 34. | Advanced Pharmaceutical Organic Chemistry – II                 | Advanced Pharmaceutical Organic Chemistry – IICourse is removed and a new Course Medicinal Chemistry – Iis included.  |
| 35. | Pharmacy Practice & Pathophysiology – II                       | Pharmacy Practice & Pathophysiology – IICourse is removed and a new Course Pharmacology – Iis included.   |
| 36. | Pharmaceutical Technology – II                                 | Pharmaceutical Technology – IICourse is removed and a new Course Pharmacognosyand Phytochemistry– Iis included.   |
| 37. | Pharmaceutical Jurisprudence                                   | This course is removed.   |
| 38. | Physical Pharmaceutics Laboratory – II                         | Course name has been changed to Physical Pharmaceutics – II Practical   |
| 39. | Pharmaceutical Analysis and Physical Chemistry Laboratory – II | Pharmaceutical Analysis and Physical Chemistry Laboratory – IICourse is removed and a new Course Pharmaceutical Organic Chemistry – III Practical is included.  |
| 40. | Advanced Pharmaceutical Organic Chemistry Laboratory – II      | Advanced Pharmaceutical Organic ChemistryLaboratory – IICourse is removed and a new Course Medicinal Chemistry – IPractical is included.  |
| 41. | Pharmacy Practice & Pathophysiology Laboratory – II            | This course is removed.   |
| 42. | Environmental Sciences   | This course is removed.   |
| 43. | Pharmacognosy and Phytochemistry – I                           | <p>1. Course name has been changed to Pharmacognosy and Phytochemistry – II</p> <p>2. Unit I is changed from history and development of pharmacognosy to metabolic pathways in higher plants</p> <p>3. Unit II is changed from general principles of cultivation and</p>  |



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|     |   | <p>collection of vegetable drugs to secondary metabolites</p> <ol style="list-style-type: none"> <li>Unit III is changed from adulteration of crude drugs to isolation, identification and analysis of phytoconstituents.</li> <li>Unit IV is changed from detailed study of crude drugs including carbohydrates and lipids to industrial production, estimation and utilisation of phytoconstituents.</li> <li>Unit V is changed from detailed study of crude drugs includes volatile oils, saponins, sterols and alkaloids to basics of phytochemistry.</li> </ol>   |
| 44. | Medicinal Chemistry – I                                 | <ol style="list-style-type: none"> <li>Course name has been changed to Medicinal Chemistry – II</li> <li>Unit I is changed from introduction to antihistamine agents</li> <li>Unit II is changed from adrenergic neurotransmitters, sympathomimetic agents to antianginal agents, diuretics, antihypertensive agents.</li> <li>Unit III is changed from adrenergic antagonists, cholinergic receptors and parasympathomimetic agents to anti-arrhythmic, antihyperlipidemic, coagulants and anticoagulants, drugs used in congestive heart failure.</li> <li>Unit IV is changed from cholinergic blockers, ganglionic blockers to drugs acting on endocrine system.</li> <li>Unit V is included with antidiabetic agents.</li> </ol> |
| 45. | Pharmaceutical Dosage Forms and Cosmetic Technology – I | Pharmaceutical Dosage Forms and Cosmetic Technology – I is removed and a new Course Industrial Pharmacy – I is included.   |
| 46. | Pharmacology – I  | <ol style="list-style-type: none"> <li>Course name has been changed to Pharmacology – II.</li> <li>Unit I is changed from general pharmacology to pharmacology of drugs acting on CVS</li> <li>Unit II is changed from pharmacokinetics to Drugs acting on CVS and urinary system.</li> <li>Unit III is changed from introduction to PNS, parasympathomimetics, parasympatholytics, sympathomimetics, sympatholytics, to Autocoids and related drugs.</li> <li>Unit IV is changed from neuromuscular blockers, skeletal muscle relaxants, local anesthetics to drugs acting on endocrine system.</li> <li>Unit V is changed from drugs acting on urinary system to endocrine system and bioassay.</li> </ol>                         |
| 47. | Pharmaceutical Microbiology                             | This course is removed.  |
| 48. | Hospital and Clinical Pharmacy – I                      | This course is removed.  |
| 49. | Pharmacognosy and Phytochemistry Laboratory – I         | <ol style="list-style-type: none"> <li>Course name has been changed to Pharmacognosy and Phytochemistry – II Practical</li> <li>Included the following topics – morphology of crude drugs, isolation detection of active principles, paper</li> </ol>  |

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|     |  | chromatography, TLC, analysis of crude drugs by chemical tests.   |
| 50. | Medicinal Chemistry Laboratory – I                                 | This course is removed.   |
| 51. | Pharmacology Laboratory – I  | <ol style="list-style-type: none"> <li>1. Course name has been changed to Pharmacology – II Practical.</li> <li>2. Included the following topics – effect of drugs on heart, BP, heart rate, diuretic activity, DRC, bioassay, determination of PA2 value and PD2 value, anti-inflammatory and analgesic activity.</li> <li>3. Excluded all the topics</li> </ol>   |
| 52. | Pharmaceutical Microbiology Laboratory                             | This course is removed and a new course Industrial Pharmacy Practical included.   |
| 53. | Pharmaceutical Dosage Forms and Cosmetic Technology Laboratory – I | This course is removed.   |
| 54. | Pharmacognosy and Phytochemistry–II                                | Pharmacognosy and Phytochemistry–II Course is removed and a new Course Herbal Drug Technology is included.  |
| 55. | Medicinal Chemistry – II   | <ol style="list-style-type: none"> <li>1. Course name has been changed to Medicinal Chemistry – III.</li> <li>2. Unit I is changed from general Anesthetics, Sedative and hypnotics to antibiotics (beta lactam, aminoglycosides, tetracyclins)</li> <li>3. Unit II is changed from skeletal muscle relaxants, antipsychotics to antibiotics (macrolides), antimalarials.</li> <li>4. Unit III is changed from anticonvulsants, CNS stimulants to antitubercular, urinary tract antiinfectives, antiviral agents.</li> <li>5. Unit IV is changed from Drugs acting ion CVS to antifungal, antiprotozoal agents, anthelmintics.</li> <li>6. Unit V is changed from diuretics, coagulants and anticoagulants, oral hypoglycemic agents, drugs acting on GIT to introduction to drug design, combinatorial chemistry.</li> </ol> |
| 56. | Pharmaceutical Dosage Forms and Cosmetic Technology –II            | Pharmaceutical Dosage Forms and Cosmetic Technology –II Course is removed and a new Course Biopharmaceutics and Pharmacokinetics is included.   |
| 57. | Pharmacology – II  | <ol style="list-style-type: none"> <li>1. Course name has been changed to Pharmacology – III.</li> <li>2. Unit I is changed from CNS pharmacology, general anaesthetics to drugs acting on respiratory system and GIT</li> <li>3. Unit II is changed from psychopharmacological agents, antiepiletics, narcotic analgesics and antagonists to chemotherapy – general principles, sulphonamides and cotrimoxazole, antibiotics.</li> <li>4. Unit III is changed from drugs acting on CVS (antihypertensive, antianginal, antiarrhythmic drugs) to antitubercular, antileprotic, antifungal, antiviral, anthelmintics, antimalarial and antiamoebic agents</li> <li>5. Unit IV is changed from antihyperlipidemic, hematinics,</li> </ol>   |

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|     |  | anticoagulants fibrinolytics, antiplatelet drugs, blood and plasma expanders to chemotherapy of UTI and STD, malignancy, immunopharmacology.<br>6. Unit V is changed from drugs acting on respiratory system to toxicology and chronopharmacology.   |
| 58. | Pharmaceutical Biotechnology                                       | 1. Unit I is changed from bioprocess technology to introduction, enzyme biotechnology<br>2. Unit II is changed from enzyme biotechnology to recombinant DNA technology.<br>3. Unit IV is changed from animal biotechnology, molecular biology and engineering to microbial biotransformation and mutation.<br>4. Unit V is changed from molecular biology database to fermentation technology. |
| 59. | Hospital & Clinical Pharmacy – II                                  | Hospital & Clinical Pharmacy – II Course is removed and a new Course Quality Assurance is included.  |
| 60. | Pharmacognosy and Phytochemistry Laboratory –II                    | Pharmacognosy and Phytochemistry Laboratory –II Course is removed and a new Course Herbal Drug Technology is included.   |
| 61. | Medicinal Chemistry Laboratory – II                                | 1. Course name has been changed to Medicinal Chemistry – III Practical.<br>2. Includes the following topics – preparation of intermediates by microwave, drawing structures and reactions using chemdraw, determination of physicochemical properties.   |
| 62. | Pharmaceutical Dosage Forms and Cosmetic Technology Laboratory –II | This course is removed.  |
| 63. | Pharmacology Laboratory – II                                       | 1. Course name has been changed to Pharmacology – III Practical.<br>2. Includes the following topics – dose calculation, antiallergic activity, antiulcer, GIT motility, hypoglycaemic, pyrogen test, oral toxicity, acute skin and eye irritation, pharmacokinetic parameters, biostatistics methods.   |
| 64. | Pharmaceutical Biotechnology Laboratory                            | This course is removed.  |
| 65. | Formulative Pharmacy and Biopharmaceutics – I                      | Formulative Pharmacy and Biopharmaceutics – I Course is removed and a new Course Industrial Pharmacy – II is included.   |
| 66. | Advanced Pharmacognosy – I   | This course is removed.  |
| 67. | Modern Methods of Pharmaceutical Analysis – I                      | 1. Course name has been changed to Instrumental Methods of Pharmaceutical Analysis.<br>2. The following topics are included in Unit II – Flame photometry, atomic absorption spectroscopy, nepheloturbidimetry.<br>3. Atomic absorption spectroscopy, nephelometry and   |

|     |   |   |
|-----|---|---|
|     |   | turbidimetry were excluded and chromatography (column, paper and Thin layer), electrophoresis are included in Unit III.<br>4. Unit IV is changed from NMR spectroscopy to Gas chromatography and HPLC.<br>5. Unit V is changed from Mass spectroscopy to Ion exchange chromatography and affinity chromatography. |
| 68. | Medicinal Chemistry – III                                 | Medicinal Chemistry – III Course is removed and a new Course Novel Drug Delivery System is included.  |
| 69. | Pharmacology – III  | Pharmacology – III Course is removed and a new Course Pharmacy Practice is included.  |
| 70. | Professional Electives                                    | Professional Electives Course is changed to new elective courses.   |
| 71. | Formulative Pharmacy and Biopharmaceutics Laboratory – I  | This Course is removed.   |
| 72. | Advanced Pharmacognosy Laboratory – I                     | This Course is removed.   |
| 73. | Modern Methods of Pharmaceutical Analysis Laboratory – I  | 1. Course name has been changed to Instrumental Methods of Pharmaceutical Analysis Practical.<br>2. Included experiments involving colorimetry, fluorimetry, nepheloturbidimetry, paper chromatography, TLC, Column chromatography, HPLC, Gas chromatography.   |
| 74. | Medicinal Chemistry Laboratory – III                      | This Course is removed.   |
| 75. | Pharmacology Laboratory – III                             | This Course is removed.   |
| 76. |   |   |
| 77. | Formulative Pharmacy and Biopharmaceutics – II            | Formulative Pharmacy and Biopharmaceutics – II Course is removed and a new Course Biostatistics and Research Methodology is included.   |
| 78. | Advanced Pharmacognosy – II                               | This Course is removed.   |
| 79. | Modern Methods of Pharmaceutical Analysis – II            | This Course is removed.   |
| 80. | Medicinal Chemistry – IV                                  | This Course is removed.   |
| 81. | Pharmacology – IV   | Pharmacology – IV Course is removed and a new Course Social and Preventive Pharmacy is included.  |
| 82. | Formulative Pharmacy and Biopharmaceutics Laboratory – II | This Course is removed.   |
| 83. | Advanced Pharmacognosy Laboratory – II                    | This Course is removed.   |
| 84. | Modern Methods of Pharmaceutical                          | This Course is removed.   |

|     |                                     |                         |
|-----|-------------------------------------|-------------------------|
|     | AnalysisLaboratory – II             |                         |
| 85. | Medicinal Chemistry Laboratory – IV | This Course is removed. |
| 86. | PharmacologyLaboratory – IV         | This Course is removed. |

**The following courses were new courses**

Remedial Biology/Remedial Mathematics

Remedial Biology Practical

Environmental sciences

Pharmaceutical Engineering Practical

Pharmaceutical Jurisprudence.

Practice School.

Electives

Pharmaceutical Marketing – Theory

Pharmaceutical Regulatory Science – Theory

Pharmacovigilance – Theory

Quality Control and Standardizations of Herbals – Theory

Computer Aided Drug Design – Theory

Cell and Molecular Biology – Theory

Cosmetic Science – Theory

Experimental Pharmacology – Theory

Advanced Instrumentation Techniques – Theory

**The overall percentage of content change in the syllabus is 93.04%**

**Ph.D. Syllabus**

The overall percentage of content change in the syllabus is 0%

The meeting came to an end with vote of thanks by the Chairperson.

