

## **Meeting of the Board of Studies in Mathematics (UG)**

Minutes of the meeting of UG Board of Studies in Mathematics which is held on Saturday, 6<sup>th</sup> January 2018 at 11.45 a.m., in Board Room (APRC) at Sacred Heart College, Tirupattur.

**AGENDA:** To review and approve Allied Biostatistics for B.Sc (Microbiology) which is to be implemented from the academic year 2018 – 19.

**CHAIR PERSON:** **Dr. R. Murali**  
UG Head and Associate Professor,  
Department of Mathematics  
Sacred Heart College (Autonomous)  
Tirupattur, Vellore Dist. 635 601.

### **External Members:**

**Dr. G. Thangaraj** **University Nominee**  
Professor and Head,  
Department of Mathematics,  
Thiruvalluvar University,  
Serkkadu, Vellore – 632 115

**Dr. K. Sankar** **Subject Expert**  
Associate Professor of Mathematics  
Anna University  
Sardar Patel Road, Guindy  
Chennai – 600025

**Prof. A. Mohamed Ali** **Subject Expert**  
Associate Professor and Head (UG)  
Islamiah College (Autonomous)  
Vaniyambadi, Vellore Dist.

**Dr.P.Narasimman,** **Alumnus**  
Assistant Professor of Mathematics,  
Thiruvalluvar University Constituent  
College of Arts and Science,  
Tirupattur – 635 901.

### **Internal Members:**

Dr. A. George Maria Selvam

Dr. G. Britto Antony Xavier

Prof. P. Manoharan

Prof. S. Kalaiarasi

Dr. A. Merceline Anita

Dr. V. Balaji

Prof. M. Antony Arockiasamy

Dr. D. Ajay

Dr. N. Nithya Priya

Prof. S.U.Vasantha Kumar

Prof.S. Savitha

Prof. B. Govindan

Dr. B. Chandra Sekar

Prof. S. Pallavi

Prof. T.G. Gerly

Prof. M. Meganathan

Prof. D. Vignesh

**Student Members**

Silviya F DR150202

Antony Raj A DR170203

UG Chairman and Head Dr. R. Murali presented to the board the newly framed UG syllabus. The following suggestions were made by the board:

**Suggestions:**

1. In the internal component, real life samples can be considered for applying the theoretical knowledge.
2. Case study can be included in the internal component.

**Resolutions:**

It is resolved to approve

- i) the following Allied Biostatistics syllabi for B. Sc Microbiology.
- ii) the existing evaluation system is to be continued.

**Year/Semester: II Yr /III SEM**  
**Credits: 5**

**Code: AM**  
**Hours/Week: 6**

### **Biostatistics – I (Microbiology)**

**Objective:** To develop the knowledge of Statistics for the students of Biochemistry and Microbiology for applying scientific design of experiments in the objective collection, processing, analysis and interpretation of scientific investigation and decision making in life sciences.

#### **Unit- I: Collection, Classification and Presentation of Data**

Collection of data – Data – Class intervals – Frequency – Frequency distribution Presentation of data – Tabular presentation – Graphic presentation – Diagrammatic presentation. (Chapter 3 to 5)

#### **Unit –II: Measures of Central Tendency**

Mean – Median – Mode – Measures of average of position. (Chapter 6)

#### **Unit –III: Measures of Dispersion**

Definition – Types of measures of dispersion – Range – Quartile deviation – Mean deviation – Standard deviation – Variance – Coefficient of Variance. (Chapter 7)

#### **Unit- IV: Correlation and Regression**

Correlation – Scatter diagram – Karl Pearson's correlation coefficient – Spearman's rank correlation coefficient – Regression. (Chapter 10)

#### **Unit-V: Vital Statistics**

Introduction – Uses of vital statistics – Systems for collection of vital statistics – Measures of vital statistics – Mortality rate – Fertility rate. (Chapter 16, Chapter 17: Pages 340-349)

#### **Book for Study:**

**Veer Bala Rastogi**, *Fundamentals of Bio-Statistics*, Ane Books Pvt. Ltd, Second Edition, New Delhi, Reprint 2011.

#### **Books for Reference:**

1. P.N Arora and P.K Malhan, *Bio-Statistics*, Himalaya Publishing House, Mumbai, 1996.
2. S.P.Gupta , *Statistical Methods*, Sultan Chand and Sons, New Delhi, 2004
3. N. Gurumani, *An introduction to Bio-Statistics*, 2-e, MJP Publishers, Chennai, 2005.
4. R.S.N.Pillai Bagavathi, *Statistics*, S.Chand and Company Ltd, 2007
5. Ronald N. Forthofer, EunSul Lee and Micheal Hernandez, *Bio-Statistics*, 2-e, Academic press, 2007.
6. P.Ramakrishnan, *Bio-Statistics*, Saras Publications, Nagercoil, 2007.

**E-learning Source:** <http://stat.fsu.edu/dpati/5172>

#### **Learning Outcomes:**

By the end of the semester, the students will be able to

- Analyze several statistical concepts such as measures of central tendency and measures of dispersion
- Interpret the results of statistical concepts accurately and effectively

**Year/Semester: II Yr /IV SEM**

**Credits: 5**

**Code: AM**  
**Hours/Week: 6**

### **Biostatistics – II (Microbiology)**

**Objective:** To develop the statistical skills needed for students of Biochemistry and Microbiology for applying distributions and significance tests in the analysis and interpretation of scientific investigation and decision making in life sciences.

#### **Unit –I: Probability**

Introduction – Definition of probability – Basic concepts of Probability – Problems - Probability Distributions – Binomial – Poisson – Normal distribution, Measures of Deviation from Normal Distribution. (Chapters 8 and 9)

#### **Unit – II: Test of Hypothesis and Test of Significance**

Statistical inference – Test of significance – Student's t-test – Types of t-test. (Chapters 12 and 13)

#### **Unit –III: Analysis of Variance (ANOVA)**

Introduction – Test of ANOVA – One way analysis of variance – F-test. (Chapter 11)

#### **Unit – IV: Chi- Square Test**

Introduction – Definition – Significance of chi-square test – Probability value from chi- square. (Chapter 14)

#### **Unit – V: Nonparametric Tests**

Introduction – Sign test – Wilcoxon signed rank test – Wilcoxon rank sum test – The Mann Whitney test – The Kolmogorov – Smirnov goodness of fit test – The Spearman's Rank Correlation Coefficient. (Chapter 15)

#### **Book for Study:**

**Veer BalaRastogi**, *Fundamentals of Bio-Statistics*, Ane Books Pvt. Ltd, Second Edition, New Delhi, Reprint 2011.

#### **Books for Reference:**

1. P.N Arora and P.K Malhan, *Bio-Statistics*, Himalaya Publishing House, Mumbai, 1996.
2. S.P.Gupta , *Statistical Methods*, Sultan Chand and Sons, New Delhi, 2004
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6. Ronald N. Forthofer, EunSul Lee and Michele Hernandez, *Bio-Statistics*, 2-e, Academic press, 2007.s

**E – Learning source:** <http://stat.fsu.edu/dpati/5172>

#### **Learning Outcomes:**

At the end of the course, the students will be able to

- Interpret results of the methods of statistical inference and design appropriately
- Apply probability distribution and significance tests to a variety of problems arising in biological fields.

**CHAIR PERSON : Dr. R. Murali**

R. Murali  
6/1/18

**External Members:**

**Dr. G. Thangaraj**  
Professor and Head,  
Department of Mathematics,  
Thiruvalluvar University,  
Serkkadu, Vellore – 632 115

**University Nominee**

G. C.  
06/01/2018

**Dr. K. Sankar**  
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Anna University  
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**Subject Expert**

K. Sankar  
6/1/18

**Prof. A. Mohamed Ali**  
Head (UG) and Associate Professor  
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Islamiah College (Autonomous)  
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**Subject Expert**

A. Mohamed Ali  
6/1/18

**Dr. P. Narasimman,**  
Assistant Professor of Mathematics,  
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College of Arts and Science,  
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**Alumnus**

P. Narasimman

**Internal Members:**

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Dr. G. Britto Antony Xavier

G. Britto Antony Xavier

Prof. P. Manoharan


P. Manoharan

Prof. S. Kalaiarasi


S. Kalaiarasi

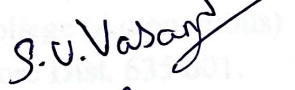
Dr. A.Merceline Anita 

Dr. V.Balaji 

Prof. M.Antony Arockiasamy 


Dr. D.Ajay 

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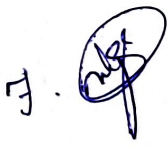
Prof. S.Pallavi 


Prof. T.G.Gerly 

Prof. M. Meganathan 

Prof. D.Vignesh 

**Student Members**

Silviya F DR150202 

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## **Meeting of the Board of Studies in Mathematics (UG)**

Minutes of the meeting of UG Board of Studies in Mathematics, which is held on Wednesday, 9<sup>th</sup> January 2019 at 11.00 a.m., in OASIS at Sacred Heart College (Autonomous), Tirupattur – 635 601, Vellore Dt.

**Agenda:** To review the present syllabus of First Three Semesters.

**Chair person (UG):** Dr. R. Murali

### **Members**

Dr. A. George Maria Selvam

Dr. G. Britto Antony Xavier

Prof. S. Joseph

Dr. P. Manoharan

Dr. S. Kalaiarasi

Dr. A. Merceline Anita

Dr. V. Balaji

Dr. M. Antony Arockiasamy

Dr. D. Ajay

Dr. N. Nithya Priya

Dr. S.U. Vasantha Kumar

Mrs. S. Savitha

Dr. B. Govindan

Dr. B. Chandra Sekar

Dr. T.G. Gerly

Mr. M. Thanigajalam

Mr. D. Arun

Miss. D. Saraswathi

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Jensi E AP170235  
Jothishwaran S BU160246  
Dinesh A N BP170206  
Ponmana Selvan A DR170205  
Meganathan M DR180203

**External Members:****Dr.U.Rizwan**

Associate Professor and Head,  
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Islamiah College (Autonomous),  
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**University Nominee****Dr. M. Pitchaimani,**

Assistant Professor,  
Ramanujan Institute for Advanced Study in Mathematics,  
University of Madras,  
Chepauk, Chennai – 600 005.

**Subject Expert****Dr.R.Vijayaragavan**

Associative Professor  
Department of Mathematics  
Thiruvalluvar University  
Vellore-632115

**Alumni****Mr.G.S.Krishnamuthy,**

Group Manager, (Computer Aided Engineering)  
Royal Enfield,  
Chennai.

**Industrial Expert**



UG Chairman and Head Dr. R. Murali presented to the board the present I and II year Syllabi. The following suggestions were made by the board:

**Discussion:**

- After a detailed discussion, members appreciated the quantitative and qualitative content of the syllabi.
- External members suggested New Text Books and some modifications to be implemented in the next revision.

**Resolution:**

- It is resolved to implement the modifications and suggestions in the next revision.

**Chair Person:** **Dr. R. Murali**  
UG Head and Associate Professor,  
PG & Research Department of Mathematics  
Sacred Heart College (Autonomous)  
Tirupattur, Vellore Dist. 635 601.

*R. Murali*  
9/1/2019

**External Members:**

**Dr. U. Rizwan**  
Associate Professor and Head,  
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*U. Rizwan*  
9/1/2019

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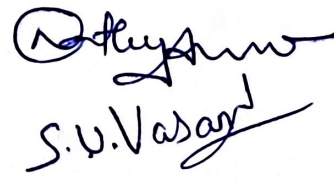
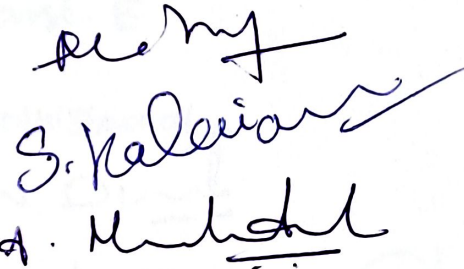
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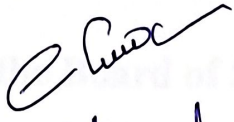


**Alumni**  
**Dr. R. VIJAYARAGAVAN, Ph.D.,**  
Associate Professor  
Department of Mathematics  
Thiruvalluvar University  
Serkkadu, Vellore - 632 115

**Industrial Expert**



Dr. B. Chandra Sekar



Dr. T.G. Gerly



Mr. M. Thanigajalam

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Miss. D. Saraswathi

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**STUDENT MEMBERS**

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AU160240

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