



MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA
Thiruvalla - 689101

SCHOOL OF BIOSCIENCES

Names of the students studied course on experiential learning (2017-18)

Programme: M.Sc. Biochemistry
Course: BC1 MOO 1PC 2 BIOPHYSICS, BIO INSTRUMENTATION AND
BIOINFORMATICS

M.Sc. Biochemistry (2017-19 batch)

Sl.No.	REGISTER No.	NAME OF STUDENT
1.	170011019775	ABHISHEK. A
2.	170011019776	AKSHAY B .CHANDRAN
3.	170011019777	AKSHAYA S S
4.	170011019778	ANEESHA S KUMAR
5.	170011019779	ANJALI PRAKASH
6.	170011019780	ANJALI G
7.	170011019781	ANJU JOSE K
8.	170011019782	ASHLIN MARY JOSE
9.	170011019783	ATHIRA ARAVIND
10.	170011019784	BASMA YOOSUF
11.	170011019785	JEEBA S BABU
12.	170011019786	NEENA KRISHNAN
13.	170011019787	RAHUL KRISHNAN
14.	170011019788	SAISHMA S SURENDRAN




Head, School of Bio Sciences
Mar Athanasios College for Advanced Studies
(MACFAST)
Tiruvalla-689 101
Kerala, India

BC1MOO1PC2-Core Course2**BIOPHYSICS, BIOINSTRUMENTATION AND BIOINFORMATICS**

Hours per week: 4

Credits-4

UNIT I

Structural levels of proteins and stabilizing forces. 3D structure of immunoglobulin. Methods for studying the structure of macromolecules-CD, ORD, X Ray and NMR.

UNIT II

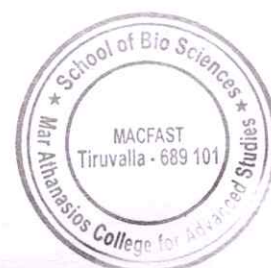
Macromolecular interactions Protein DNA interaction-helix turn helix, helix loop helix, zinc fingers, homeo box. Protein RNA interaction-RNA recognition motif Protein-protein interaction-leucine zippers, bHLH, bZip motifs.

UNIT III**Spectroscopic techniques for the study of Biomolecules**

Principle, Instrumentation, and Applications of UV-Visible spectroscopy, Infra Red spectroscopy, Fluorescence spectra, and luminescence. Principle methods and applications of polarimetry, cytometry and flow cytometry.

Isotope techniques

Ionising and nonionising radiation, radiation units, dosimetry, applications of radioisotopes in blotting techniques, Radioimmunoassay and tracer studies.



UNIT IV

Separation techniques

Principle, Instrumentation, methods and Application of all types of Adsorption and Partition Chromatography-Paper chromatography, Thin layer chromatography, Gel filtration chromatography, Affinity chromatography, Ion-exchange chromatography and HPLC and HPTLC.

Centrifugation- Principle, methods and application, Ultra centrifugation.

Principle, Instrumentation, methods and Applications of Free and zone Electrophoresis-Paper electrophoresis, Gel electrophoresis, Polyacrylamide gel electrophoresis, SDS PAGE, Capillary electrophoresis, Isoelectric focusing, agarose gel electrophoresis, isotachopheresis, and pulse field gel electrophoresis.

UNIT V

Bioinformatics

Introduction to bioinformatics, data mining, application of data mining in Bioinformatics, Biological databases and search tools, data organization, sequence databases, structural data bases, derived and specialized data bases, DNA and RNA sequence databases, protein sequence databases, genomic databases, mutation and polymorphism databases, data deposition. Three dimensional structure of proteins, prediction of structural classes, motifs, folds and domains, classification of three dimensional structures in Brookhaven protein data bank (HSSP, SCOP, FSSP, CATH); protein



structure prediction, structural alignment methods, homology modelling, dynamical programming, molecular simulation, rational drug design and docking, Applications of bioinformatics.

REFERENCES

1. Gradwohl's Clinical Laboratory Techniques. Stanley S. Raphael. W.E. Company, London, UK
2. Practical Biochemistry-Principles and techniques. Keith Wilson and John Walker (Eds), University Press, Cambridge UK.
3. Modern Experimental Biochemistry. Rodney F Boyer. Benjamin/Cummings Publishing Company Inc. Redwood City, California.
4. Chromatographic methods. A Braithwaite and FJ Smith. Chapman and Hall, New York.
5. Gel Electrophoresis of Nucleic acids-A Practical approach. Rickwood D and BD Hames. IRL Press, New York
6. Spectrophotometry and Spectrofluorimetry: A Practical Approach. Harris DA and CL Bashford (Ed.) IRL Press, Oxford.
7. Introduction to Spectroscopy. Donald L. Pavia Gary M. Lipman, George S Kriz. Harcourt Brace College Publishers, Orlando, Florida
8. Introduction to Biophysics-Sokal R.R. & Rohlf F.J
9. Introduction to Bioinformatics; Attwood T K and Parry-Smith D J Pearson Education Ltd.
10. An Introduction to Computational Biochemistry; C. Stan Tsai, Wiley India Pvt. Ltd





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SCHOOL OF BIOSCIENCES

Names of the students studied course on experiential learning (2017-18)

Programme: M.Sc. Biochemistry
Course: BC4MOO4PP4 LABORATORY COURSE IV

M.Sc. Biochemistry (2016-18 batch)

Sl.No.	REGISTER No.	NAME OF STUDENT
1.	160011011959	ANJALI S.
2.	160011011960	ANJU C. ANAND
3.	160011011961	BHAVYA XAVIER
4.	160011011962	BINSU BOSE
5.	160011011963	CHINJU VARGHESE
6.	160011011964	LEKSHMI DEVI J.C.
7.	160011011965	RAGIMOL M.R.
8.	160011011966	RAHUMATH A.S.
9.	160011011967	RESHMA SHAJI
10.	160011011968	RIA ELZA VARGHESE
11.	160011011969	SONIA PHILIP
12.	160011011970	SUJILA S.P.
13.	160011011971	VARSHA S.S.
14.	160011011972	VINITHA FRANCIS




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hypertension, prevention and treatment of heart disease, Diet strategies, Drug therapy, Acute respiratory failure, The metabolic syndrome.

Unit V

Nutrition and Renal disease, kidney stones and treatment, the nephrotic syndrome, Renal failure, kidney transplants and diet, Dialysis and Nutrition, Nutrition and liver disorders, Fatty liver and hepatitis, Cirrhosis, Gall stones, Nutrition, cancer and HIV infection, How cancer develops, Consequence of cancer, Treatment for cancer, Medical Nutrition therapy. How HIV develops, Consequences of HIV infection. Medical Nutrition Therapy. Ethical issues in Nutrition care

REFERENCES

1. Understanding normal and Clinical nutrition, Whitney, Cataldo of holfes Sixth edition
2. Nutritional Biochemistry- Tom Brody.
3. A text Book of Medical Biochemistry- M.N Chatterje and R. Shindea, Jaypeepub.
4. Harpers Illustrated Biochemistry- R.K murray, D.kGarnnes. And V.V Rodwell, McGraw Hill.
5. Medical Physiology- A.C. Guyton and J.E Hall, Saunders pub.
6. Human Physiology. C.C. Chatterjee, medical and Allied Agency
7. Nutritional Biochemistry- Swaminathan
8. Life span nutrition- Conception through life- S.R Rolfes, LK De Bruyne and E.N Whitney.
9. Normal and Therapeutic nutrition CH Robinson and MR Lawler.

BC4 MOO4 PP4- Practical 4

LABORATORY COURSE IV



Hours/ Week – 10

Credits-4

Clinical Biochemistry Experiments

1. Liver function tests

Estimation of total proteins in serum

Estimation of serum albumin by BCG method

Estimation of albumin – globulin ratio in Serum

Estimation of serum bilirubin

Assay of SGOT & SGPT-DNPH method

Assay of alkaline phosphatase-King & Armstrong method

2. **Renal Function tests**

Estimation of blood urea by diacetyl monoxime method

Urea clearance test

Estimation of creatinine by Jaff 's method

Creatinine clearance test

Estimation of uric acid-caraway method

Estimation of plasma bicarbonate

3. Glucose tolerance test

4. Fructose tolerance test

5. Analysis of normal and abnormal urine.

6. Check the reliability of various methods using Levy Jenning plot

REFERENCES





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Names of the students studied course on experiential learning (2017-18)

Programme: M. Sc. Bioinformatics
Course: BIF4M004PD Project OR Dissertation

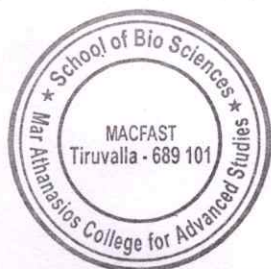
M. Sc. Bioinformatics (2016-18 batch)

Sl.No.	REGISTER No.	NAME OF STUDENT
1.	160011011442	ABHIJITH M. ANANDAN
2.	160011011443	ANNU S. GEORGE
3.	160011011444	DALIYA SIMON
4.	160011011445	DILNA T.
5.	160011011446	KESIYA JOY
6.	160011011447	SAMUEL GRACE ANNA MATHAI




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**REGULATIONS, SCHEME AND
SYLLABUS FOR
M.Sc. BIOINFORMATICS PROGRAMME
(UNDER CSS)
AT AFFILIATED COLLEGES OF
MAHATMA GANDHI UNIVERSITY
KOTTAYAM, KERALA
(W.E.F 2012-2013)**



SEMESTER	COURSE TITLE	HOURS/ WEEK	CREDIT	TOTAL CREDIT
I	BIF1M001PC1-Introduction to Cell Biology and Biomolecules	4	4	19
	BIF1M001PC2-Fundamentals of Applied Mathematics & Biostatistics	3	3	
	BIF1M001PC3-Genetics and Molecular Biology	4	4	
	BIF1M001PC4-Introduction to Computing and Bioinformatics	4	4	
	BIF1M001PP1-Laboratory Course 1	10	4	
II	BIF2M002PC5-Metabolism & Bioenergetics	4	4	19
	BIF2M002PC6 -General Microbiology	3	3	
	BIF2M002PC7 –Genomics	4	4	
	BIF2M002PC8 -Bioinformatics & PERL	4	4	
	BIF2M002PP2- Laboratory Course 2	10	4	
III	BIF3M003PC9 – Proteomics	4	4	19
	BIF3M003PC10- Immunology	4	4	
	BIF3M003PC11 –DBMS & Biological Databases	4	4	
	BIF3M003PC12- Bioinformatics in the future	3	3	
	BIF3M003PP3 - Laboratory Course 3	10	4	
IV	BIF4M004PE1 - Genetic Engineering & IPR	5	4	23
	BIF4M004PE2 - CADD & Molecular Modelling	5	4	
	BIF4M004PE3 - Bioprogramming & Soft Computing Techniques	5	4	
	BIF4M004PP4 - Laboratory Course 4	10	4	
	<u>BIF4M004PD - Project OR Dissertation</u>	-	4	
	VIVA-VOCE	-	3	
Additional Electives of Fourth Semester	BIF4M004PE4- IPR & Bioethics	5	4	
	BIF4M004PE5- Pharmaceutical Chemistry & Action of Selected Drugs	5	4	
	BIF4M004PE6- Basics of Nanotechnology	5	4	





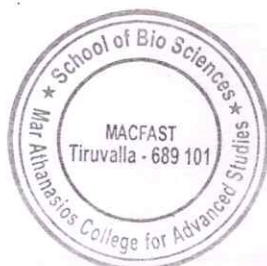
SCHOOL OF BIOSCIENCES

Names of the students studied course on experiential learning (2017-18)

Programme: M.Sc. Food Technology & Quality Assurance
Course: FT 3MPP 717 Practical-Processing Technology of Animal-based Foods

M.Sc. Food Technology & Quality Assurance (2016-18 batch)

Sl.No.	REGISTER No.	NAME OF STUDENT
1.	160011011579	ABHIRAMI S NAIR
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3.	160011011581	ALEENA T MATHEWS
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17.	160011011595	JESLA JOHN
18.	160011011596	MANIJA MADHU
19.	160011011597	MATHAI MATHEW
20.	160011011598	MERCY JOSE
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22.	160011011600	NADIYA NAZER
23.	160011011601	NIKHIL A N
24.	160011011602	PRIYA ELIZABETH FRANCIS
25.	160011011603	RENU JOHN
26.	160011011604	SERA TREESA MATHEW
27.	160011011605	SIBIN BABU
28.	160011011606	TEENA JOSEPH
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30.	160011020738	AMMU BEJOE



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FT 3MPP 717: Practical- Processing Technology of Animal-based Foods

Credits 2

72 h

OBJECTIVES

To provide a balanced methodology to the principles and techniques that is important in the processing of food

Preparation of milk based products

30 h

- Preparation of Ice cream
- Preparation of Sreekhand
- Preparation of Kalakand
- Preparation of Paneer
- Preparation of Gulab jamun
- Preparation of Rasagula
- Preparation of Peda
- Preparation of Kheer
- Preparation of Khoa
- Preparation of Kulfi
- Preparation of Dahi
- Preparation of Rabri
- Preparation of Malai
- Preparation of Buttermilk and Lassi
- Preparation of Basundi
- Preparation of Yogurt
- Preparation of Whey beverage

Preparation of meat based products

22 h

- Preparation of Bacon
- Preparation of Sausage
- Preparation of Meat Kofta
- Preparation of Meat cutlet
- Preparation of Barbequed chicken
- Preparation of Meat roll
- Preparation of Meat jerky

Preparation of egg based products

10 h

- Preparation of Fried Egg
- Preparation of Scrambled Egg
- Preparation of Egg Burji
- Preparation of plain omlette
- Preparation of Fluffy omlette
- Preparation of Scotch egg



- Preparation of Meringues
- Preparation of Souffles
- Preparation of Mayonnaise
- Preparation of Custard

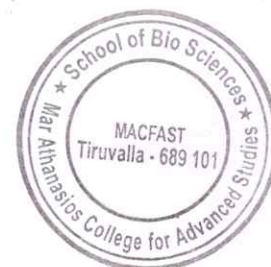
Preparation of fish based foods

10 h

- Preparation of Fish curry
- Preparation of Fish rolls
- Preparation of Fish mollee
- Preparation of fish fingers
- Preparation of Prawn pickle
- Preparation of fish cake

Reference

- Srivastava, R.P.O and Kumar, S. Fruit and vegetable preservation, International Book distribution Company, Lucknow, 1994.
- Srilakshmi, B. Food Science. New Age International Publishers, New Delhi, 2003.
- Subalakshmi, G and Udipi, S.A. Food processing and preservation. New Age International Publishers, New Delhi, 2001.
- Girdhari Lal, Siddappa G.S., Preservation of fruits and Vegetables.,1998





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Names of the students studied course on experiential learning (2017-18)

Programme: M.Sc. Phytomedical Science & Technology
Course: PHYTOM2M002PP2 Laboratory course-II

M.Sc. Phytomedical Science & Technology (2017-19 batch)

SI.No.	REGISTER No.	NAME OF STUDENT
1.	170011021077	AMAL P K
2.	170011021078	ANU ANNA JOY
3.	170011021079	ATHIRA THOMAS
4.	170011021080	JESSIYA JACOB




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PHYTOM2M002PP2- LABORATORY COURSE-II
PRACTICALS (based on *Phytom 05* and *Phytom 06*) (150 hrs)

1. **Plant physiology:** Determination of leaf extract (cell sap) pH; Estimation of relative water content in leaves; Extraction of pigments; Separation and identification of pigments (chlorophylls, carotenoids and xanthophylls) by chromatography; Growth analysis: Net primary productivity (NPP), Relative growth rate (RGR), Net assimilation rate (NAR) and Leaf weight ratio (LWR).
2. Estimation of chlorophyll: Spectrophotometric assay of total chlorophyll, chlorophyll-a and chlorophyll-b.
3. **Biochemistry:** Estimation of total sugar, reducing sugars, lipids, phenolic compounds, terpenes, terpenoids, amino acids and proteins; Assay of enzymes: protease, amylase, invertase and succinic dehydrogenase; Electrophoresis: Protein
4. **Microbiology:** Staining of bacteria: simple, Gram's staining, spore staining, etc.; Media preparation: Nutrient agar, blood agar, etc.; Cultivation of microbes, bacterial motility and colony characteristics; Biochemical tests for bacterial identification; Study of anti-bacterial effects of plant extracts; Sterility tests for *Ayurvedic* concepts.
5. **Ecology:** Community analysis for quantitative characteristics through quadrat method: quadrat sampling, minimum size and number of quadrat, measurement of density, abundance, frequency, dominance and importance value index (IVI).





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MBA 2017-19 BATCH

SL.NO	NAME
1	Abhishek Purushothaman
2	Abiya Babu
3	Achu C Thampi
4	Ajo Varghese Rajan
5	Akash Mathew
6	Akhila O V
7	Akhilesh Kumar C A
8	Akhilmon V Thomas
9	Akshaya E S
10	Albin Baby
11	Aleena Jacob
12	Alma Mariam Abraham
13	Ameer Ismail
14	Amitha Rajesh R
15	Ananthu A Kochumon
16	Ananthu Santhan
17	Ancy Monachan
18	Anita Ann Alex
19	Anjali B Joseph
20	Anju Vijay
21	Anu Abraham
22	Anu Joseph
23	Anuja Elizabeth Joseph
24	Arya M M
25	Ashik S Antony
26	Ashma C Das
27	Aswani S Kumar
28	Athira Babu
29	Athira R
30	Athira V M
31	Bibin John Babu
32	Bijina Beegam
33	Brian Binu Thomas
34	C S Chitra
35	Chinnu Maria Thankachan
36	Christopher George





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA

(MACFAST)

37	Cyriac Stephen George
38	Divya Ann Varghese
39	Gibin Babu
40	Harikrishnan V M
41	Haripriya J
42	Heera Maria Vilson
43	Jayasree J
44	Jerin George
45	Jibi Joseph
46	Jiby Varghese
47	Jikku George John
48	Jikku Mathew Thomas
49	Jikku Varughese Koruth
50	Jilbi Susan James
51	Job Justin
52	Jojo John Varughese
53	Joshni Mary Thomas
54	Ligitha Anu Ninan
55	Megha A P Panicker
56	Melbin Francies
57	Merin Anna Mathew
58	Merin Chacko
59	Midhun S Abraham
60	Nidhi Elizabeth Philip
61	Nimmy Francis
62	Praveen P Nair
63	Preethy Mariam Kacheriparambil
64	Riya Eliz Biju
65	Robin George Kurian
66	Rohan Alex Mathew
67	Rony K J
68	Sandra Biju
69	Sanju Mariam Thomas
70	Sebin Sebastian
71	Senu C Mathew
72	Shanu Eappen
73	Shany Thomas
74	Shijin Babu
75	Sijin Saji
76	Simi Chacko
77	Smrithi Viswanath
78	Sneha Cathrine James





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79	Sneha Sara Thomas
80	Sreejesh S
81	Sruthi Raj
82	Steffi Philip
83	Sudheesh S Nair
84	Swathy Harikuttan
85	Swathy Sathyavan
86	Teenamol Antony
87	Tom Abraham
88	Vandana V
89	Veena Mol V
90	Veena Vinayan
91	Vijitha M Nair
92	Vishakh T Devan
93	Vivek Vijayan



Delhi.

3. Mizra S. Saiyadain, *Human Resources Management*, 4th Ed, Tata McGraw Hill.

4. Raymond Noe, *Employee Training and Development*, Tata McGraw Hill.

5. K . Aswathappa, *Human Resource Management- Text & Cases*, Tata McGraw Hill.

6. Wayne Mondy, *Human Resource Management*, Pearson, India.

7. Joe Martocchio, *Strategic Compensation: A Human Resource Management Approach*, Pearson, India.

CC12- OPERATIONS MANAGEMENT

Module I

Introduction to Production and Operations Functions, Interaction of Operations Management with other functional areas of Management – Manufacturing and Non Manufacturing operations and their Classifications – Operations Strategy as a part of Corporate Strategy – Operations Planning and Control – Operations Forecasting: Forecasting methods.

Module II

Facility Locations – Cost competition and Hidden factors – Steps in location selection – Types of Manufacturing Systems and Layout – Facility Layouts – Layouts by Products and Process – Life balancing – Design of Operations Systems : Aggregate planning and Master Scheduling, MRP, CRP. Material Handling: Principles, Equipments for Materials Handling.

Module III

22

Work study, Time and Method study: Definition – Importance – Aims and Procedures – Implications on Productivity – Work measurement – Work sampling – Work environment – Industrial safety – Value analysis.

Module IV

Materials Management – Functions – Material planning and Budgeting – Value Analysis - Purchase functions and Procedure - Inventory control – Types of Inventory – Safety stock – Inventory Control Systems – Perpetual – Periodic – JIT – KANBAN.

Managing Vendors; Vendor Analysis, Rating and Selection – Procedure and Criterions.





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(MACFAST)

Name of the students studied courses on experiential learning

MBA 2017-19 BATCH

SL.NO	NAME
1	Abhishek Purushothaman
2	Abiya Babu
3	Achu C Thampi
4	Ajo Varghese Rajan
5	Akash Mathew
6	Akhila O V
7	Akhilesh Kumar C A
8	Akhilmon V Thomas
9	Akshaya E S
10	Albin Baby
11	Aleena Jacob
12	Alma Mariam Abraham
13	Ameer Ismail
14	Amitha Rajesh R
15	Ananthu A Kochumon
16	Ananthu Santhan
17	Ancy Monachan
18	Anita Ann Alex
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20	Anju Vijay
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37	Cyriac Stephen George
38	Divya Ann Varghese
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42	Heera Maria Vilson
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44	Jerin George
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46	Jiby Varghese
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48	Jikku Mathew Thomas
49	Jikku Varughese Koruth
50	Jilbi Susan James
51	Job Justin
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53	Joshni Mary Thomas
54	Ligitha Anu Ninan
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62	Praveen P Nair
63	Preethy Mariam Kacheriparambil
64	Riya Eliz Biju
65	Robin George Kurian
66	Rohan Alex Mathew
67	Rony K J
68	Sandra Biju
69	Sanju Mariam Thomas
70	Sebin Sebastian
71	Senu C Mathew
72	Shanu Eappen
73	Shany Thomas
74	Shijin Babu
75	Sijin Saji
76	Simi Chacko
77	Smrithi Viswanath
78	Sneha Cathrine James





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80	Sreejesh S
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85	Swathy Sathyavan
86	Teenamol Antony
87	Tom Abraham
88	Vandana V
89	Veena Mol V
90	Veena Vinayan
91	Vijitha M Nair
92	Vishakh T Devan
93	Vivek Vijayan



LIST OF COURSES OF MBA PROGRAMME

LIST OF SUBJECTS

CC01	Principles of Management
CC02	Managerial Communication
CC03	Managerial Economics
CC04	Accounting for Management
CC05	Quantitative Methods for Management
CC06	Legal Environment of Business
CC07	Computer Application in Business
CC08	Organisational Behavior

CC01 PRINCIPLES OF MANAGEMENT

MODULE 1 : Introduction to Management Definitions - Managerial Effectiveness & Efficiency - Levels of Management and Skills – Managerial roles – Evolution of Management Thought – Functional Areas of Management – Management Process – Management and administration, Pedigree of Management, Management as a Profession.

MODULE II: Planning and Decision Making Nature & Importance of planning – Types of Planning – Steps in Planning with Illustration – Prerequisites of Planning - Limitations - MBO – Process, Hierarchy of Plans, Principles of Planning. Decision Making – Programmed & Non – Programmed Decisions – Decision Making Process, Techniques, forecasting, Conditions of Risk, Uncertainty – Group Decision Making.

MODULE III: Organising Organizing – Formal and Informal Organisation, Organising Process – Bases of Departmentation, Decentralisation – Span of management – Authority and Power – Delegation of Authority – Line and Staff Relationships, functional, Project and Matrix Structures – Centralization Vs Decentralization, Modern Organisations; Learning, Net working and Virtual Organisations – Principles in Organising.

MODULE IV: Staffing, Motivation, Leading & Communication An overview of Staffing Function – Staffing Process. Motivation – motives, motivators, Motivational Theories. Leadership – Elements of Leadership, Leadership Styles, Traditional and Modern theories. Communication – Communication process and barriers in Communication. Principles of Motivation, Leadership and Communication

MODULE V: Controlling, Co-ordination and Emerging Trends in Management

Controlling – Importance – Levels of Control – Control Process – Different types of Control – Effective Controlling – Control techniques – Co-ordination – Principles of Control and Co-ordination, Management





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Name of the students studied courses on experiential learning

MBA 2016-18 BATCH

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3	84603	Afra Azad
4	84604	Aju Varghese
5	84605	Akhilesh James
6	84606	Amal Augustine
7	84607	Amal Varghese
8	84608	Aneetta Marin Kurien
9	84609	Anisha Mathew
10	84610	Anita Ann Thomas
11	84611	Ansu Mary Joji Varghese
12	84612	Antony Tom
13	84613	Anu Susan Raji
14	84614	Anusha Anil
15	84615	Aparna
16	84616	Ardra S Pillai
17	84617	Arun Babu
18	84618	Aswathy Shaji
19	84619	Biju V Mathew
20	84620	Binu Mathew James
21	84621	Chinnu Marine John
22	84622	Chippymol Joy
23	84623	Christeena Susan Varghese
24	84624	Devika M
25	84625	Divya Samuel
26	84626	Elsy Johnson
27	84627	Geesela James
28	84628	Gokul R Nair
29	84629	Goldy Perumal Samuel
30	84630	Gopika S
31	84631	Greeshma Babu
32	84632	Ismitha. E.V
33	84633	Jackson Antony John
34	84634	Jais Thomas
35	84635	Jaison Jackson
36	84636	Jeena Jose
37	84637	Job P Varghese

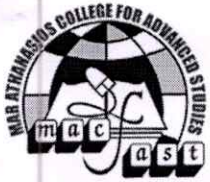




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38	84638	Josmy Jose
39	84639	Josny Jose
40	84640	Justin James
41	84641	Kalamol S
42	84642	Libu V Babu
43	84643	Liji Philip
44	84644	Linda Ann Thomas
45	84645	M Krishna Kumar
46	84646	Manisha Mathew
47	84647	Manju George
48	84648	Meenu M Kumar
49	84649	Megha Babu
50	84650	Megha Chacko Peter
51	84651	Midhun Raj
52	84652	Neenu Alen Varghese
53	84653	Nithina Mohan
54	84654	Pallavi Dinesh C P
55	84655	Panikar Vishnupriya Surendra
56	84656	Priya Raman. G
57	84657	Rahul S
58	84658	Raiby Mathew
59	84659	Rakul Krishnan G
60	84660	Reenu Mathew
61	84661	Rejo Raju Mathew
62	84662	Reshma.E. Kurien
63	84663	Resmimol K.S
64	84664	Ridson P Davis
65	84665	Rijo Suresh
66	84666	Rini Sara Thomas
67	84667	Rintumol Chacko
68	84668	Riya Antony
69	84669	Riya Mariam Reji
70	84670	Robin Kuriakose
71	84671	Rohan P
72	84672	Ronak Radhakrishnan
73	84673	Roshin Mathew
74	84674	Ruby Prasad
75	84675	Sachin Varghese
76	84676	Sebastian Philip
77	84677	Seeja Mathai
78	84678	Sheba Mary Abraham
79	84679	Sheba Mary John





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80	84680	Sherin Susan Jacob
81	84681	Shijin Sam Varghese
82	84682	Shilpa Ashok
83	84683	Shyma John
84	84684	Shyno Sajan
85	84685	Sijimol Joshua
86	84686	Swathi Satheesan
87	84687	Taniamol Antony
88	84688	Thollayirakuzhiyil Shibil Varghese
89	84689	Tinsu Achu Chacko
90	84690	Tiny Saly Ponnachan
91	84691	Tracy Ann Mathew
92	84692	Vimal
93	84693	Vineetha Daniel
94	84694	Vishnu Sajan
95	84695	Vishnu Satheesan
96	84696	Vysakh .C. H
97	84697	Ann Stella Sebastian
98	84698	Pooja Prakash



FOURTH SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC21	Strategic Management	40	60	100
EC 1	ELECTIVE 7 (Major Specialization)	40	60	100
EC 2	ELECTIVE 8 (Major Specialization)	40	60	100
EC 3	ELECTIVE 9 (Minor Specialization)	40	60	100
CC22	Project & Comprehensive Viva Voce	-	200	200
	Total	160	440	600

CC21-STRATEGIC MANAGEMENT

Module I

Introduction to Strategic Management – Concept of Strategy, Process of Strategy, Strategic Framework; Vision, Mission, Objectives and Goals. Strategic Analysis – Environmental Analysis, Competitive forces, Internal analysis SWOT Analysis.

Module II

Business level strategies – Cost leadership, Differentiation, Focus. Corporate level strategies- Stability strategies, Expansion strategies – Intensification, Integration,

International expansion, Diversification strategies, Merger, Acquisitions, Strategic alliance, Turnaround strategies.

Module III

Implementation and Control –Leadership in Strategic Management; Portfolio Analysis, BCG Matrix, GEC Model, etc, Control Process Analysis and Follow-up Action for Control, Evaluation Strategy.

Module IV

Corporate Management; Corporate Policy, Corporate Governance, Top Management, Code and Laws of Corporate Management, Corporate Scenarios and Strategy; Strategies for Stable and Dynamic markets, Strategies for Global Markets.

Module V

IT and Strategy, R&D and Strategy, Knowledge Management – Knowledge Sources, Knowledge Creation, KM framework, Trends and Challenges in KM. Innovation and creativity, Innovation Culture. Building Creative Organization. Corporate Social Responsibility, Ethics and Values, Philanthropy.



References

1. Glueck, W F and Lavch, L. R *Business policy and Strategic Management*, McGraw Hill, New Delhi.
2. Porter, E, Michael *Competitive Advantage – Creating and sustaining Superior Performance*. Free press London.
3. Shrivastava, R.M.(1999) *Management Policy and Strategic Management* Himalaya Publishing House, Mumbai.
4. A.C.Hax and NS, *Strategic Management: An Integrative Perspective*, Prentice Hall, India.
5. Gregory G.Dess and Alex Miller, *Strategic Management*, McGraw Hill. India



MCA 601D- MAIN PROJECT

Guidelines for Project Work- June 2016 Admn. onwards

The Master of Computer Applications (MCA) programme prepares the students to take up positions as Systems Analysts, Systems Designers, Software Engineers, Programmers and Project Managers in any field related to information technology. As part of the curriculum, all students who are into their sixth semester will have to carry out a project preferably in a software industry or any research organization for duration of one full semester. The courses studied and the mini project & the main project handled at final year will give the comprehensive background to work on diverse application domains.

The objective of the MCA project work is to develop quality software solution. During the development of the project, the student should involve in all the stages of the software development life cycle like requirements engineering, systems analysis, systems design, software development, testing strategies and documentation with an overall emphasis on the development of reliable software systems. The primary emphasis of the project work is to understand and gain the knowledge of the principles of software engineering practices, so as to participate and manage a large software engineering projects in future. Students should take this project work **very seriously**, and carry out the same individually. The topics selected should be complex and large enough to justify as an MCA project. The project should be genuine and original in nature and should not be copied from anywhere else.

After the completion of this project work, the student should be able to:

- Describe the Systems Development Life Cycle (SDLC).
- Evaluate systems requirements.
- Complete a problem definition and its evaluations.
- Construct and evaluate UML's/Data flow diagrams and Data Dictionaries
- Evaluate alternative tools for the analysis process.
- Create and evaluate such alternative graphical tools as systems flow charts and state transition diagrams.
- Plan the systems design phase of the SDLC.
- Distinguish between logical and physical design requirements.
- Design and evaluate system Inputs & outputs and UI.
- Decide various data structures.
- Perform coding for the project.
- Documentation requirements and prepare and evaluate systems documentation.
- Generate various reports.
- To decide the future scope and further enhancement of the system.
- Develop of the ability to assess the implications of work performed.
- Get good exposure and command in one or more application areas and on the software
- Develop of the ability to communicate effectively.

All students are expected to work on a real-life project preferably in some Industry / Research and Development Laboratories / IT-ITES Organisations. The complete project work should be done by the student only. The role of guide should be about guidance wherever any problem encounters during project.

- *Not more than one student is permitted to work on a project.*

Each Student should be involved in each and every phase of Project Development. If it is found that student is not involved in any phase; for example coding phase, it may lead to the rejection/disqualifying of the project at any stage.

- Title of the project should be kept the same throughout the project.



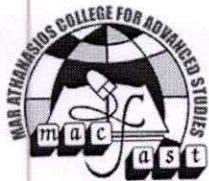
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Guidelines for preparing the Project Dissertation

This document lists the contents required for the academic project report done as part of the MCA Curriculum. Section names have been listed with description. The descriptions have been provided in italics. *Important: This page and the text in italics present throughout this document are to give you guidance. Please do not include them in your project report.*



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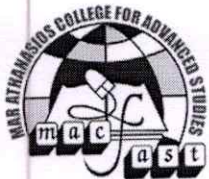
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**DEPARTMENT OF COMPUTER APPLICATIONS
LIST OF STUDENTS STUDIED COURSES ON EXPERIENTIAL
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Sl No	Reg. No	Name of the Student
1	600238	Ansu Elsa Koshy
2	700341	Aghil Suku
3	700342	Akhil S Kumar
4	700343	Aneena Sara Varghese
5	700344	Anisha Sumila Joseph
6	700345	Ann Susan Alexander
7	700346	Anu Vijay
8	700347	Archana Mohanan
9	700348	Arjun T K
10	700349	Arun G
11	700350	Binsu Dan Varghese
12	700351	Bipin C Mathew
13	700352	Blessy Beena Sunny
14	700353	Blessy Elsa T. Damian
15	700354	Chinnu C Babu
16	700355	Delna Rodrigues
17	700356	Femy Rose Shibu
18	700357	Geethu Krishna C S
19	700358	George Panicker
20	700359	Gokul Krishnan
21	700360	Jasmin Sebastian
22	700361	Neethu Elsa Varghese
23	700362	Pearly Varghese
24	700363	Rajeshwari Rajendran
25	700364	Reshma Madhu
26	700365	Resmi Ramesh
27	700366	Rincy Susa Aniyon
28	700367	Rinirajan
29	700368	Saibi Samuel

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30	700369	Samcy Merin Sam
31	700370	Shorn Chacko Rajan
32	700371	Silpa S Kurup
33	700372	Sreekuttan B
34	700373	Sreelekshmi R
35	700374	Sreelekshmi S
36	700375	Sruthi S Nair
37	700376	Stephy John
38	700377	Tinu M
39	700378	Tiya Mary Alex
40	700379	Vipin K Das


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MCA 107 - PC HARDWARE LAB

1. Identification of PC Components and Assembling the PC
2. Installation of Operating Systems and formatting the Hard Disk
3. Replacing and fitting of Hard Disk and Floppy Disk on PC
4. Identification of different cards in the PC
5. Setting of jumpers for Interrupt Request on mother Board
6. PC Tools and its use
7. Disc Managers and it's use
8. Virus removal and disc scan
9. Connecting input devises and installing their driver software
10. Replacing and fitting Processors, Motherboards and Memory.

Text Book :

The Complete Reference – PC Hardware – Craig Zacker & John rourke, Edition 2001 Tata McGraw Hill



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LIST OF STUDENTS STUDIED COURSES ON EXPERIENTIAL
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Sl.No	Reg.No:	Name of the Student
1	804071	Abhijith G Abhilash
2	804072	Abhinand V
3	804073	Achsa N Sam
4	804074	Aevin K Wilson
5	804075	Aisha Muhamed
6	804076	Akhil Murali
7	804077	Akhil Kumar A
8	804078	Akhil P R
9	804079	Anjali N
10	804080	Anjana Bose
11	804081	Ann Anie Reji
12	804082	Anoop C Mathew
13	804083	Archana Aravind
14	804084	Ashwin Issac Shaji
15	804085	Athira Rajeev
16	804086	Athria Ravi
17	804087	Bency Baby
18	804088	Bincy Susan Thomas
19	804089	Blessy Varghese
20	804090	Chanjitha Babu
21	804091	Dyson Thomas
22	804092	Gayathri Gopan
23	804093	Gopu G Nair
24	804094	Harikrishnan R
25	804095	Haritha Hari
26	804096	Jesnamol James
27	804097	Jibin Prasannan
28	804098	Jossy Mary varghese
29	804099	Kannan Shaji



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30	804100	Kripa Thankachen
31	804101	Maqsooda A M
32	804102	Merin M Thomas
33	804103	Nandagovind M
34	804104	Neenu Rose Varghese
35	804105	Nibin John
36	804106	Niji
37	804107	Nithin Antony
38	804108	Noble Philip
39	804109	Noufia S
40	804110	Nowfal Nazar
41	804111	Parvathy Prasannan
42	804112	Reeba Varghese
43	804113	Remya R
44	804114	Revathy R Nair
45	804115	Rohini Sreekumar
46	804116	Roshan Jose T.
47	804117	Roshin Mariam Abraham
48	804118	Seba P george
49	804119	Shilpa Anand
50	804120	Shyju varghese
51	804121	Sini Varghese L
52	804122	Smrithi S Lal
53	804123	Sofiya Varghese
54	804124	Sojan Somarajan
55	804125	Unni Shaji
56	804126	Veena Upendran
57	804127	Vidhya Thulasi
58	804128	Vipin Dev
59	804129	Vishnu



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MCA 206P DATA BASE MANAGEMENT SYSTEM

Introduction to MySQL Database

Installation of MySQL

- Table Design- Using foreign key and Normalization
- Practice SQL Data Definition Language(DDL) commands
- Table creation and alteration(include integrity constraints such as primary key, referential integrity constraints, check, unique and null constraints both column and table level
- Other database objects such as view, index, cluster, sequence, synonym etc.
- Practice SQL Data Manipulation Language (DML) commands
- Row insertion, deletion and updating
- Retrieval of data
- Simple select query
- Select with where options (include all relational and logical operators)
- Functions: Numeric, Data, Character, Conversion and Group functions with having clause.
- Set operators
- Sorting data
- Sub query (returning single row, multiple rows, more than one column, correlated sub query)
- Joining tables(single join, self join, outer join)
- Data manipulations using date functions
- User defined functions in a query
- Hints in queries to optimize performance
- Manage ODBC/JDBC connections
- Practice Transaction Control Language (TCL) commands (Grant, revoke, commit and save point options)
- Usage of triggers, functions and procedures using PL/SQL constructs
- 10 PL/SQL Programs to be developed demonstrating PL/SQL Concepts

- Development of a Databases using MySQL that could be used with one of the following application:
 - Payroll Information
 - Student Information System
 - Library Information System etc.

- Backup and restore databases;
- Query optimization in a database



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**DEPARTMENT OF COMPUTER APPLICATIONS
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LEARNING-MCA 2017-2020 (Regular)**

Sl No	Register No	Name of the Student
1	900061	Abhirami S Babu
2	900062	Aiswaryalakshmi S.
3	900063	Aleesha Shamsudeen
4	900064	Binisha Susan Biju
5	900065	Blesson K Chandy
6	900066	Blessy Benny
7	900068	Jaina Jacob
8	900069	Jisha M Varghese
9	900071	Keziya Susan John
10	900072	Manisha Elizabeth Philip
11	900073	Manjumol
12	900074	Nikila Ajayan
13	900075	Nikitha Ajayan
14	900076	Parvathy K
15	900078	Rean Sosa Varghese
16	900079	Reshma R
17	900080	Shilpa S Mohan
18	900081	Sinu Manoj
19	900082	Stennia Thomas
20	900083	Swathy Sajeev
21	900084	Yugma S



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MCA 107P DATA STRUCTURES PRACTICALS THROUGH C

1. Programs to represent sparse matrix manipulation using arrays.
2. Programs to represent Singly Linked List.
3. Programs to represent Doubly Linked List.
4. Programs to represent Circular Linked List. Polynomial addition using Arrays and Linked List.
5. Programs to represent Stack operations using array and linked list Programs to represent Queue operations using array and linked list.
6. Programs for Conversion of infix to postfix.
7. Programs for Evaluation of Expressions.
8. Programs to represent Binary Tree Traversals.
9. Programs to represent Searching procedures (Linear search, Binary search and Interpolation search).
10. Programs to represent sorting procedures (Selection, Bubble, Insertion, Quick, Heap, Merge)
11. Program to find the minimum cost spanning tree using Prim's Method.
12. Program to implement 8-Queens Problem.



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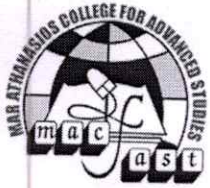
MCA 306 Java Programming LAB

1. Program to illustrate class, objects and constructors
2. Program to implement overloading, overriding, polymorphism etc
3. Program to implement the usage of packages
4. Program to create our own exception
5. Program for handling file operation
6. Implement the concept of thread programming
7. Program to implement Generic class and generic methods
8. Applet program for passing parameters
9. Applet program for running an audio file
10. Program for event-driven paradigm in Java
11. Event driven program for Graphical Drawing Application
12. Program that uses Menu driven Application
13. Program to implement JDBC in GUI and Console Application
14. Web page design using HTML and client side validation using Javascript
15. Programs to implement session Handling and Cookies in Servlets and JSP
16. Socket programming to implement communications
17. Develop a multi-threaded GUI application of your choice.



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2	800112	Ajo T Sam
3	800113	Archa S Madhu
4	800114	Archana P Anirudhan
5	800115	Arjun R Pillai
6	800116	Ashbin Shaji
7	800117	Athira P A
8	800118	Athira S
9	800119	Athira Sreekumar
10	800120	Edwin Varghese George
11	800121	Meera Rani Thomas
12	800122	Namiya Anna Saju
13	800123	Neethu Mariam Raju
14	800124	R. Sreeparvathy
15	800125	Sonu Varghese
16	800126	Sreenath K.P
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18	800128	Thushara S



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