



St. Albert's College (Autonomous)
DEPARTMENT OF CHEMISTRY

Certificate Program
IN

WATER QUALITY MANAGEMENT

30 Hours Program
INAUGURATION
SRI. V. T. SAJIMON

Chief Environmental Scientist,
Kerala State Pollution Control Board

at 2.00 pm on 19th September 2019

for UG/PG Students in Science Discipline

Course Fee: Rs. 1000/-

Classes on : Tuesdays & Wednesdays

Time : 2.00 - 3.00 pm

For more details Contact

Dr. Nify Benny

9995545757

Certificate Course on Water Quality Management

This course contains modules which focus on employability and skill enhancement

Syllabus

Credits -2

Hours 30

Learning objectives:

- To create awareness on the different sources of water and their pollution
- To provide a knowledge on water quality parameters and their relevance
- To expertise the learners in sampling and analysis of potable water samples
- To familiarize the various treatment methods – conventional and modern methods
- To focus on the recent advances in water quality management.

Expected outcomes:

By the end of this course, the student will be able to

- Know water quality characteristics of water sources including: Groundwater sources, Aquifers, Surface Water sources etc.
- Describe the sampling procedures for different parameters
- Analyze water samples and interpret the results to ensure adequate water quality
- Apply the various treatment methods to required samples to maintain water quality

Theory paper - Water Quality Management for Sustainable Development (15 hours)

Module I- Water Quality Management (3 hours)

Surface water, water quality evaluation and criteria- Ground water - ground water contamination-Principal sources- harmful effects in man, Soil- Groundwater Protection- Source control and regulatory measures, Recent advances in water quality management.

Module II- Water Quality Parameters and its Assessment (6 hours)

Water Sampling and preservation, Sampling methods , Water quality parameters- temperature, pH, EC, Colour, turbidity, total dissolved solids(TDS), acidity, alkalinity, total hardness,chloride, fluoride, sulphate, phosphate, nitrate, DO, BOD, COD, Total Coliforms.

Module III- Water Treatment (6 hours)

Introduction, traditional methods of water treatment, modern treatment methods- separation of suspended matter, Decolourisation of water, Removal of iron and manganese - ion exchange,

oxidation, chlorination, aeration, flotation. Sedimentation, filtration, ion exchange, desalination, reverse osmosis, electrodialysis. Disinfection- boiling and chlorination, UV light disinfection, ozone in water treatment, wastewater reuse.

Practical paper - **Water Quality Analysis**

(15 hours)

Analysis of water quality parameters-temperature, pH, EC, Colour, turbidity, total dissolved solids(TDS), acidity, alkalinity, total hardness, chloride, fluoride, sulphate, phosphate, nitrate, DO, BOD, COD, total coliform.

References:

1. APHA (American Public Health Association, American water works Association and water pollution control federation). (1992), Standard methods for the examination of water and waste water, Am. Publication Health Association, Washington, DC, USA.
2. NEERI, Manual on water and waste water Analysis, National Environment Engineering Research Institute Nagpur, (3402) (1986).
3. WHO, guideline for drinking water quality Geneva (1984).
4. Environmental Protection Agency (EPA). 1990. Fact sheet: drinking water regulations under the Safe Drinking Water Act. Washington, DC: EPA Office of Drinking Water Criteria and Standards Division.
5. American Water Works Association (AWWA). 2001. Reinvesting in drinking water structure: dawn of the replacement era. Denver, CO: AWWA.

Method of Evaluation:

Written Examination – Objective Type Questions

(1 hour - 30 Marks)

Skill Test – Analysis of any one water quality parameter

(30 minutes – 20 marks)



St. Albert's College (Autonomous), Ernakulam
Department of Chemistry and Research Centre

CERTIFICATE

This is to certify that Miss. **PARVATHY V.R.** has completed the **Certificate Programme** in *Water Quality Management* conducted by the Department of Chemistry and Research Centre, St. Albert's College (Autonomous), Ernakulam in the academic year 2019-2020.

Dr. Nelson Rodrigues
Principal

Dr. Nify Benny
Coordinator

Dr. Vijay John Gerson
Head of the Department



St. Albert's College(Autonomous)

Department of Computer Science

Introduction to Internet of Things(IoT)

Certificate Program-45 Hours

Course Fee-Rs.2000/-



PROGRAM OBJECTIVES

- To walk through technology timeline (brief history) and evolution of IoT.
- Gain knowledge about IoT applications across various segments.
- Understand IoT architecture and its building blocks.

Weekly Assignments
Discussions
Projects

Who will benefit from this course?

Fresh Graduates
IT Professionals
Designers
Electrical & Electronic Engineers
Existing & Budding Entrepreneurs

Certificate will be given to those who register and write the exam and score greater than or equal to 40% final score.

For more details: mail to - computerscience@alberts.edu.in

CSCCP0119-CERTIFICATE PROGRAM IN INTERNET OF THINGS (IoT)

About the course

Internet of Things (IoT) is presently a hot technology worldwide. Government, academia, and industry are involved in different aspects of research, implementation, and business with IoT. IoT cuts across different application domain verticals ranging from civilian to defense sectors. These domains include agriculture, space, healthcare, manufacturing, construction, water and mining, which are presently transitioning their legacy infrastructure to support IoT. Today it is possible to envision pervasive connectivity, storage, and computation, which, in turn, gives rise to building different IoT solutions. IoT-based applications such as innovative shopping system, infrastructure management in both urban and rural areas, remote health monitoring and emergency notification systems, and transportation systems, are gradually relying on IoT based systems. Therefore, it is very important to learn the fundamentals of this emerging technology.

Program Objectives

- To walk through technology timeline (brief history) and evolution of IoT.
- Gain knowledge about IoT applications across various segments.
- Understand IoT architecture and its building blocks.

Program Specific Outcomes

- PSO1: Competent, and innovative with a strong cognizance in the area of sensors, IoT, data science, controllers and signal processing through the application of acquired knowledge and skills
- PSO2: Apply advanced techniques and tools of sensing and computation to solve multi-disciplinary challenges in industry and society.
- PSO3: To exhibit independent and collaborative research with strategic planning, while demonstrating the professional and ethical responsibilities of the engineering profession.

Prerequisites for the Course

The course is designed for students with at least a basic level of understanding of programming languages, as well as knowledge of computer fundamentals.

Who will benefit from this course?

Internet of Things has a huge scope of growth for IT professionals, electrical and electronics engineers, designers and solution architects. It is a blessing for existing and budding entrepreneurs who are interested in building smart solutions for their customers. Professionals working in sectors such as pharmaceuticals, real estate, sales, finance, designing, manufacturing, electrical equipment, retail, healthcare, etc. can also benefit from learning about IoT solutions. Fresh graduates and newcomers can also start their career on the right foot with an Internet of Things certification.

Detailed course contents

- Networking fundamentals
- Computer networks, topologies
- OSI reference model
- Brief history of internet
- Brief history and evolution of IoT
- Modern day IoT applications
- Technologies related to IOT
- Connectivity terminologies
- IoT network configurations
- IoT gateways
- Sensing
- Actuation
- Basics of IoT networking
- IoT challenges

Course Outcomes

- Able to understand the application areas of IoT.
- Able to realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks.
- Able to understand building blocks of Internet of Things and characteristics.

Syllabus

Credits : 3 credits

Total Hours : 45 hours

Modules : 5

Module 1 (8 hours)

Definition, Models, LAN, WAN, MAN, Type of connections, Point to point, Multi point, Topology and categories, Mesh, Star, Bus, Ring, OSI Reference, Model, Brief, OSI layers, Introduction to IoT, Origin, Definition, Characteristics, IoT Market Share, Evolution of connected devices, IOT Enablers, Connectivity Layers, Baseline Technologies, M2M, CPS, WoT, Terminological Interdependence

Module 2 (9 hours)

Connectivity Terminologies, IOT LAN, IOT WAN, IOT Node, IOT Gateway, IOT Proxy, IOT Network Configurations, Gateways, Introduction, IOT Gateways, Multi-homing, IPV4, IPV6

Module 3 (6 hours)

Sensors-Definition, Transducers, Sensor- Features, Sensor-Resolution, Sensor-Classes, Analog Sensor, Digital Sensor, Scalar Sensor, Vector Sensor, Sensor Types, Sensorial Deviations, Errors

Module 4 (10 hours)

Actuator –Definition, Actuator –Types, Hydraulic Actuators, Pneumatic Actuators, Electric Actuators, Thermal/Magnetic Actuators, Mechanical Actuators, Soft Actuators, Shape Memory Polymers Actuators, Light Activated Polymers, IOT

Components, Functional Components of IOT, Example-IOT Implementation, IOT Interdependencies,

Module 5 (12 hours)

IOT Service Oriented Architecture, IOT Categories, Industrial IOT, Consumer IOT, IOT Gateways, IOT and Associated Technologies, Technical Deviations from Regular Web (brief), Key Technologies for IOT (brief), IOT Challenges, Considerations, complexity, wireless networks, scalability

INTERNET OF THINGS (IoT)
Instructional Hours – 45 Hrs.

Sl. No.	Topics	Hours
MODULE 1	Networking Fundamentals & Introduction to IOT	8
1.1	Definition	0.5
1.2	Models	
1.2.1	LAN	
1.2.2	WAN	
1.2.3	MAN	
1.3	Type of connections	0.5
1.3.1	Point to point	
1.3.2	Multi point	
1.4	Topology and categories	1
1.4.1	Mesh	
1.4.2	Star	
1.4.3	Bus	
1.4.4	Ring	
1.5	OSI Reference Model	1
1.5.1	Brief	
1.5.2	OSI layers	
1.6	IoT Origin	0.5
1.7	Definition	0.5
1.8	Characteristics	0.5
1.9	IOT Market Share	0.5
1.10	Evolution of connected devices	0.5
1.11	IOT Enablers	0.5
1.12	Connectivity Layers	0.5
1.13	Baseline Technologies	1
1.13.1	M2M	
1.13.2	CPS	

1.13.3	WoT	
1.14	Terminological Interdependence	0.5
MODULE 2	Introduction to IOT-Part II	9
2.1	Connectivity Terminologies	2
2.1.1	IOT LAN	
2.1.2	IOT WAN	
2.1.3	IOT Node	
2.1.4	IOT Gateway	
2.1.5	IOT Proxy	
2.1.6	IOT Network Configurations	1
2.2	Gateways	3
s2.2.1	Introduction	
2.2.2	IOT Gateways	
2.3	Multi-homing	1
2.4	IPV4	1
2.5	IPV6	1
MODULE 3	Sensing	6
3.1	Sensors-Definition	1
3.1.1	Transducers	
3.2	Sensor- Features	0.5
3.3	Sensor-Resolution	0.5
3.4	Sensor-Classes	2
3.4.1	Analog Sensor	
3.4.2	Digital Sensor	
3.4.3	Scalar Sensor	
3.4.4	Vector Sensor	
3.5	Sensor Types	1
3.6	Sensorial Deviations, Errors	1

MODULE 4	Actuation	10
4.1	Actuator –Definition	1.5
4.2	Actuator –Types	3.5
4.2.1	Hydraulic Actuators	
4.2.2	Pneumatic Actuators	
4.2.3	Electric Actuators	
4.2.4	Thermal/Magnetic Actuators	
4.2.5	Mechanical Actuators	
4.2.6	Soft Actuators	
4.2.7	Shape Memory Polymers Actuators	
4.2.8	Light Activated Polymers	
4.3	IOT Components	3
4.3.1	Functional Components of IOT	
4.3.2	Example-IOT Implementation	
4.4	IOT Interdependencies	2
MODULE 5	Basics of IOT Networking	12
5.1	IOT Service Oriented Architecture	3
5.2	IOT Categories	1
5.2.1	Industrial IOT	
5.2.2	Consumer IOT	
5.2.3	Case Studies-Arduino Based	8

Suggested Reading

1. "The Internet of Things: Enabling Technologies, Platforms, and Use Cases", by Pethuru Raj and Anupama C. Raman (CRC Press)
2. "Internet of Things: A Hands-on Approach", by Arshdeep Bahga and Vijay Madisetti (Universities Press)
3. Research papers

Important for Certificate:

Weekly Assignments and Discussion Forum

Final score will be calculated as: 20% assignment score+5% Attendance + 75% final exam score.



**ST. ALBERT'S COLLEGE (AUTONOMOUS),
ERNAKULAM**

**DEPARTMENT OF
ECONOMICS**

**HUMAN
RIGHTS
FOUNDATION
COURSE**

09/01/2019 - 23/03/2019

**FOR MORE DEATILS CONATCT
ASST. PROF. MS. BENLY B.
DEPARTMENT OF ECONOMICS**

ST. ALBERT'S COLLEGE (Autonomous)

ERNAKULAM



CERTIFICATE PROGRAMME

CPHRT- Foundation Course on Human Rights

Syllabus

Module 1- Conceptual Background and Framework

Human Rights prior to 1945

UN Charter and UDHR

International Covenants on Human Rights (5 Hours)

Module II- Meaning and Definition of Human Rights

Nature, Importance and characteristics of Human Rights

Bases and sources of Human Rights

Kinds of Human Rights (7 Hours)

Module III- Human Rights in India

Constitutional Provisions (Preamble, Fundamental Rights and DPSP)

National Human Rights Commission (NHRC)

Human Rights Movements (Amnesty International and PUCL) (5 Hours)

Module IV- Challenges to Human Rights

State and Human Rights

Human Rights and Terrorism

Human Rights and Marginalized groups (Dalits, Women and Children) (8 Hours)

Moot Court Training Sessions (5 Hours)

Students Enrolled

Name	Class	Signature
1) Sona Joseph	2 nd BA Economics	sona
2) Thomas Anojel George	2 nd BA Economics	Thomas
3) HRISHIK THOMAS ROY	2 nd BA Economics	HRISHIK
4) Koushina Priya	2 nd BA Economics	K.P.
5) Anandu Venugopal	2 nd BA Economics	AN
6) Alen P.S	2 nd BA Economics	AL
7) Sneha George	2 nd BA Economics	Sneha
8) Siva Nandha	2 nd BA Economics	Siva
9) Jasemon George	2 nd BA Economics	Jasemon
10) Sebastian T.J.	2 nd BA Economics	Sebastian
11) Tosna Pustio	2 nd BA Economics	Tosna
12) Sandaa M.S	2 nd B.A. Economics	Sandaa
13) Vishnupriya K.S.	" "	Vishnu
14) Lydhya Mary	1 st BA English	Lydhya
15) Keerthy Unnikrishnan	2 nd BA Economics	Keerthy
16) Saniga Sajeevan	2 nd BA Economics	Saniga
17) Rajalakshmi Rajendran	2 nd BA Economics	Rajalakshmi
18) Lizana Layek	2 nd BA Economics	Lizana
19) Selin Sona	1 st BA Economics	Selin
20) Aldriya Joseph	1 st BA Economics	Aldriya
21) Sneha Santhosh	1 st BA Economics	Sneha
22) Anu Francis	1 st B.A. Economics	Anu
23) Lea Jile	1 st BA - Economics	Lea
24) Diya James	1 st B.A Economics	Diya
25) Sheel Steacy	1 st B.A Economics	Sheel
26) Akshaya Tomy	1 st B.A Economics	Akshaya
27) N.A. Sudharmma	1 st B.A Economics	N.A.
28) Sneha Seno	1 st B.A Economics	Sneha
29) Aneeta clement	1 st BA Economics	Aneeta
30) Anila KL	1 st BA Economics	Anila
31) Ann Steyna T.X		Ann

ATTENDANCE REGISTER -
CERTIFICATE PROGRAM in BANKING -



**ST. ALBERT'S COLLEGE
(Autonomous)
DEPARTMENT OF ECONOMICS**



**Certificate program in
BANKING & RBI B
GRADE OFFICER'S
TRAINING**

- 60 Hours program
- On Tuesdays & Wednesdays
- 2pm - 3 pm
- Course fee: 2000 + material
- Best study materials
- Mock tests
- Internal and external faculties

Course coverage:

RBI Bulletin
Current Affairs
Economic Concepts
TORA & TONA

**Class starts on
20th August, 2019**



AMDG

ST. ALBERT'S COLLEGE (Autonomous)

ERNAKULAM

CERTIFICATE PROGRAM

BANK MANAGEMENT

ADD ON COURSE for Undergraduate Program

60 Hours Duration – credits: 4

BANK MANAGEMENT

PROGRAM OBJECTIVES (POs)

PO-1 Critical Thinking and Problem-Solving Skills: To develop an informed and analytical approach to learning and demonstrate an in-depth knowledge of the subject and to give his/her opinion supported by logical reasoning and problem-solving skills.

PO-2 Employability in Banking sector: To develop skills and capabilities to employ in banking sector

PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO-1 To provide students well founded education in Bank Management
- PSO-2 To provide structured curricula which support the academic development of students.
- PSO-3 To provide and adapt curricula that prepares our graduates for employment in banking sector
- PSO-4 To provide students with the opportunity to focus on applied and policy issues in Economics.
- .

CERTIFICATE PROGRAM IN BANK MANAGEMENT

CO No.	Course Outcomes	PSOs Addressed	Cognitive Level
CO-1	Students are able to comprehend the working of banks and to familiarize with the basic principles and concepts which are often used in banking literature.	1,2,3, 4	U

SYLLABUS

Module 1

TORA, TONA, TOEL – aptitude tests – (15 hours)

Module 2

-Micro & Macro Economics-

- Consumer behavior & firms, value of factors of production.
- Markets: Monopoly, Perfect & Imperfect competitions
- General equilibrium of price & activity, economic welfare, policy interventions
- National income & its components, basic macro identities & macro balance.
- Major Macro Economic school of thoughts: Classical, Keynesian & Monetarist.
- Consumption & Investment demand, Demand management.
- Money demand & supply.

Module 3

-Growth & Development-

- Measurement of growth: National income & per capita income.
- Sustainable development & environment issues.
- India's experiments with planned development models & its outcomes.
- Structural issues:-

Savings & investment, demography, urbanization,

Productivity, poverty, inequality, employment.

- Agriculture: Policy & developments.
- Role of Public sector enterprises in the key economic sectors.
- India's service sector, trade, tourism & communication.
- Human Development.

Module 4

-Social Structure & Public Economics-

- Multi-culture & Demographic trends.
- Urbanization & migration.
- Gender issues & social movements.
- Indian political system.
- Public Goods & Public Finance.
- Taxes :-

Direct & indirect, income taxation, corporate taxation,

Efficiency, cost & commodity taxes.

- Financial sector reforms & regulations(Banks, insurance & capital market)

- Fiscal policy & changing priorities.
- Monetary policy & its new role.
- Government expenditure policy:- various components.
- Government Debt & crowding out of private capital
- Deficit financing & its impact on economy.

Module 5

-Trade & International Economics-

- Economic reforms in India
- Industrial & labor policy , Monetary & fiscal policy
- Privatization & Role of economic planning.
- Globalization & Indian Economy.
- BOP & export- import policy.
- International economic institutions (IMF, World Bank, WTO) & Regional economic co-operation.
- Benefit of international trade: comparative & absolute advantage & its effect.
- Customs union & its impact.
- International finance & exchange rate issues in an open economy.
- International financial market:- Evolution, Benefits & Costs.

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- 20% assignment score is calculated as 20% of average of Best 8 out of 12 assignments.
- Certificate will be given to those who register and write the exam and score greater than or equal to 40% final score.



ST. ALBERT'S COLLEGE
(AUTONOMOUS), ERNAKULAM



DEPARTMENT OF LOGISTICS MANAGEMENT

Conducts

CERTIFICATE PROGRAM

in

PERSONAL ENHANCEMENT LAB

Open to
All
Students



30 HOURS
PROGRAM
COMMENCES
ON:
24th September
2019

GOAL:

To give each student a realistic perspective
of work behaviour and work expectations.

COURSE FEE: Rs. 2000/- (can be
paid in two instalments, non-
refundable)

CLASSES ON:
TUESDAY & WEDNESDAY
TIME: 2-3 PM

FOR MORE DETAILS
CONTACT:

Asst. Prof : Neenu Jose
Mob: 9895662294

Push Yourself To Places You Haven't Been Before...

PERSONAL ENHANCEMENT LAB

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Enable students to cope with rapid change, train them in specific areas to develop new knowledge, attitude and skills for a balanced lifestyle, both personally and professionally.
- Harness your personal power and organize your life towards achieving your goals.

PROGRAM OUTCOMES (POs)

- Plan for and get the career that the students desire.
- Become a more effective communicator.
- Better understand and communicate with the stakeholders of corporate world.
- Discover your behavioral style and learn strategies for recognizing and working with people of differing styles.
- Improve and develop public speaking and presentation skills.

COURSE OUTCOMES (COs)

Course Title	*Skill/ General* *PERSONAL ENHANCEMENT LAB*		
Code	*Subject Code*		
CO No.	Course Outcomes	PSOs Addressed	Cognitive Level
1	Participants will develop social skills, work life skills, emotional maturity and emotional health.	1	AP
2	Development of leadership skills to improve teamwork, creativity, efficiency & productivity.	2	C
3	Development of presentation skills to enhance sales, project explanations, self-confidence, relationship development.	1	AP

Syllabus

MODULE 1: PERSONAL SKILLS

- Soft skills - Importance of soft skills - how to improve soft skills
- Knowing yourself - Importance and process of knowing yourself - SWOT analysis
- Positive attitude - Features and sources of attitude – Attitude in workplace
- Values - Types and sources of values
- Perception - Factors influencing and improving.

MODULE 2: SOCIAL SKILLS

- Listening skills - Benefits, kinds and factors hamper listening
- Observation - Benefits of observation
- Types of communication – Channels - Types of nonverbal communications - Tips of effective communication

MODULE 3: PERSONALITY DEVELOPMENT

- Manners - practicing good manners
- Body Language - Parts importance and improving body language
- Grooming men and women
- Etiquettes - Benefits - business etiquette - dinner etiquette - email etiquette - telephone etiquette –
- Accompanying Women.

MODULE 4: PRESENTATION SKILLS

- Group discussions - Tips, Types and skills required for Group Discussion
- Public speaking – Factors
- Interview – stress interview – techniques for successful interview – interview skills

MODULE 5: PROFESSIONAL SKILLS

- Leadership and Types of leadership

- Team building - skills needed for teamwork - model of team building - Characteristics of effective team - role of effective team leader and team members
- Technical correspondence - Formal letter writing
- Job oriented skills



A Certificate Course on **NUMERICAL & REASONING ABILITY**



A O Konnully Memorial Research Centre
Department of Mathematics
St. Albert's College (Autonomous)
Ernakulam – 682018

In this flexible, hands-on program, you'll have the opportunity to attend instructor-led sessions, receive expert feedback on your progress, and access career coaching services. Upon completing the 3-months Certificate Course, you will:

- Have fulfilled the requirements necessary for attempting Numerical Ability Questions for the various PSC examinations, UPSC examinations, Banking related Examinations and even entrance examinations of different educational institutions
- Receive a Certificate issued by St. Albert's College (Autonomous), Ernakulam
- Have more than 100,000 annual job openings requires Numerical Skill

Who can apply to this Certificate Course

- Any student doing degree or Master's, who are interested in pursuing career in various administrative levels of Government organization and Banking Sectors.
- Anyone who currently prepares for PSC examinations and other entrance examinations

Course Structure

Program tuition covers all course content, projects, and resources.

You need to pay for the course in the beginning of the class:

- Course Fee : Rs. 1000
- Course Duration : 30 Hrs (2 Credits)
- Course fee does not include the required companion text.
- Student intake : 25

How the Certificate works

When you complete this Certificate Course, you'll be:

- Qualified to understand, evaluate and solve Numerical & Logical ability related questions.
- Prepared to apply techniques to solve numerical problems.
- Ready to apply to one of the many job openings that list numerical ability as a required skill.

Program Details

There are no prerequisites for this Certificate. If you are not already familiar with basic Mathematics, you may get acquainted with 12th Standard Mathematics before beginning this Certificate Course.

Services Available

As a Certificate Course Learner, you'll have access to premium services to help you succeed.

Services include:

- Instructor-led sessions
- Regular instructor communication via email
- Expert feedback on assignments
- Tracking career coaching services
- Reference Books from Library of St. Albert's College

Highlights

- Short, targeted online readings
- Practice exercises
- Peer-reviewed projects (with additional expert feedback)
- Comprehensive Final Examination

Content

Content in this program is available online and can be accessed from anywhere. Core content includes:

- Number System
- Number Series
- Simplification of Numbers
- Percentage Calculation
- Profit, Loss & Discount
- Ratio & Proportion
- Problem based on ages
- Coding and decoding
- Ranking Sequence
- Sitting Arrangement
- Blood Relationship
- Direction Sense Test
- Mensuration
- Input-output
- Probability
- Statement & conclusions
- Statement & assumptions
- Statement & arguments
- Decision Making
- Data Sufficiency
- Data Interpretation
- Project & Viva

About Department of Mathematics

The Post-Graduate and A O Konnullu Memorial Research Department of Mathematics conduct Bachelor's Degree Course in Mathematics (B.Sc Mathematics - 1947) and also a Masters Degree Course in Mathematics (M.Sc Mathematics - 1964) with specialization in computer/mathematical programming. The department is also an active research unit of the Mahatma Gandhi University. There are 11 full time faculty members in the department.

About Rev.Dr.Augustine O. Konnullu

Rev. Dr . Augustine O. Konnullu served St.Albert's College as a Mathematics Professor during the period 1949-1983 and as Principal during 1973-78. He was a great mathematician and philosopher acclaimed nationally and internationally. He published his research papers in international journals like American Mathematical Monthly, Journal of London Mathematical Society, Academia Nazionie Dei Lincei(Italy), Beiträ Zur Algebra and Geometrie (Germany), The Journal of the Australian Mathematical Society etc. His works include "Perspective Simplexes and Tucker Quadrics", "Isogonal Conjugates in E^n ", "Pivot Theorems in n-Space", "An Incidence Relationship of Hypersphere in E^n ", and so on. He introduced a new concept in mathematics which holds the name "Vector Multipliers". He was the first person to acquire Ph.D in Mathematics from the University of Kerala at the time when this was the only University in Kerala.

Faculty Members for the Certificate Programme:

- Dr. Sabu M C, M Sc, M Phil, Ph D
- Dr. Shery Fernandez, M Sc, M Phil, Ph D
- Ms. Divya Mary Daise, M Sc, M Phil
- Dr. Sajithamony T, M Sc, Ph D
- Ms. Amritha T K, M Sc

Course Coordinator:

Dr. Sabu M C, M Sc, M Phil, Ph D

Email: saboochacko@gmail.com

Mobile: 9447603122



Name of the Course: Numerical and Reasoning Ability

Duration: 3 Months

Hours per week – 2

Number of credits - 2

Aim of the Course:

When you complete this certificate course, you'll be:

- Qualified to understand, evaluate and solve numerical and logical ability related questions.
- Prepared to apply techniques to solve numerical problems.
- Ready to apply to one of the many job openings that list numerical ability as a required skill.

Objectives of the course:

- To read & understand the question first before answering.
- To know about BODMAS (Brackets, Order, Divide, Multiply, Add, Subtract) & workout problems implementing the rule.
- To use common sense to solve questions that are real life oriented (like distance, age, time)
- To learn shortcut methods or formulas to solve a question quickly.

Syllabus Content

Unit 1

10 hours

Number system, number series, simplification of numbers, percentage calculation, profit, loss and discount, ratio and proportion.

Unit 2

5 hours

Problem based on ages, coding and decoding, ranking sequence, sitting arrangement, blood relationship, direction sense test.

Unit 3

5 hours

Mensuration, input-output, probability.

Unit 4

5 hours

Statement and conclusions, statement and assumptions, statement and arguments.

Unit 4

5 hours

Decision making, data sufficiency, data interpretation.

Method of Evaluation

Attendance – 25%

Examinations – 50%

Project – 25%

Learning Resources

Textbook

1. Quantitative Aptitude for Competitive Examinations - Dr. R.S.Aggarwal - S.Chand and Co.
2. A Modern Approach to Verbal & Non-Verbal Reasoning - Dr. R.S.Aggarwal - S.Chand and Co

References

1. Quantitative Aptitude for Competitive Examinations - Abhijit Guha - Tata McGraw Hill
2. Objective Arithmetic by S.L. Gulati
3. Verbal and Non Verbal Reasoning - B.S. Sijwali - Arihant Publications
4. How to Crack Test of Reasoning in All Competitive Exam - Jaikishan, Premkishan

Name of Student & Class	26/11/2019	28/11/2019	1/12/2019	3/12/2019	5/12/2019	9/12/2019	10/12/2019	12/12/2019	16/12/2019	18/12/2019	14/1/2020
✓ 1. GANGA VS	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
✓ 2. FARZEEN. A	FA	FA	FA	FA	FA	FA	FA	FA	FA	FA	FA
✓ 3. NIMNA V.J	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
✓ 4. SANDRA. P.G	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
✓ 5. MARY SHINU THOMSON	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS
✓ 6. JENIFER JOHNSON	JJ	JJ	JJ	JJ	JJ	JJ	JJ	JJ	JJ	JJ	JJ
✓ 7. SARANYA S	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
✓ 8. ANN MARY TINCY JOSEPH	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
✓ 9. HARITHA. C.P	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC
✓ 10. AMRITHA MARY	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
✓ 11. Navaneeth. K	NK	NK	NK	NK	NK	NK	NK	NK	NK	NK	NK
✓ 12. Nygill	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY
✓ 13. Sherin Raj's	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR
14. HARI PRASAD	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP
✓ 15. AJAY JOY	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ
✓ 16. GOPIKA. GOVIND	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
17. RENIN SHAJI	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS
✓ 18. VISHAL PAUL V JAY	VP	VP	VP	VP	VP	VP	VP	VP	VP	VP	VP
✓ 19. BHAVYALAKSHMI PM	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL
✓ 20. UTOPIKA PRASAD	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP
✓ 21. Angel Mary	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
✓ 22. Anju Sudheesh	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
✓ 23. Nussy D'SOUSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
24. ADNEAD ALIN GOVEAS	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG
25. D. ANDREWS	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
26. Anny Jay	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ	AJ
26. No: Present	23	23	22	23	18	21	23	18	18	19	12
Initials of Teacher.	(1) SMC	(2) JJ	(3) AMM	(4) JJ	(5) JMD	(6) DMT	(7) J.J.	(8) SMP	(9) DMD	(10) MIJ	(11) MIJ
Signature of Teacher		<i>JA</i>		<i>JA</i>	<i>JMD</i>	<i>DMT</i>	<i>J.J.</i>	<i>SMP</i>	<i>DMD</i>	<i>MIJ</i>	<i>MIJ</i>

Name of Student	15/1/2020	16/1/2020	20/1/2020	21/1/2020	22/1/2020	28/1/2020	30/1/2020	4/02/2020	5/02/2020	6/02/2020	7/02/2020	10/02/2020	11/02/2020
1) FARZEEN A	Farzeen	Farzeen	Farzeen	a	Farzeen	Farzeen	Farzeen	Farzeen	Farzeen	Farzeen	Farzeen	Farzeen	Farzeen
2) Sandra P.G	Sandra	Sandra	a	Sandra	Sandra	Sandra	Sandra	Sandra	Sandra	Sandra	Sandra	Sandra	Sandra
3) Nimra V.J	Nimra	Nimra	a	Nimra	Nimra	Nimra	Nimra	Nimra	Nimra	Nimra	Nimra	Nimra	Nimra
4) SARANYA S	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya	Sanya
5) JENIFER JOHNSON	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer	Jenifer
6) Macey Shinu Thomson	Shinu	Shinu	Shinu	Shinu	Shinu	Shinu	Shinu	a	a	a	Shinu	Shinu	Shinu
7) Angel Mazy	Angel	Angel	Angel	Angel	Angel	Angel	Angel	a	Angel	a	Angel	Angel	Angel
8) Haaltha C.P	Haaltha	Haaltha	Haaltha	Haaltha	Haaltha	Haaltha	a	a	Haaltha	Haaltha	Haaltha	a	Haaltha
9) AMRITHA MARY P.J	Amritha	Amritha	Amritha	Amritha	Amritha	Amritha	a	a	Amritha	Amritha	a	a	Amritha
10) GOPIKA GOVIND.	Govinda	Govinda	Govinda	Govinda	a	a	a	a	a	a	a	a	a
11) Navaneeth K	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth	Navaneeth
12) Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil	Nygil
13) Sherin Raj	a	Sherin	a	Sherin	Sherin	Sherin	Sherin	Sherin	Sherin	Sherin	Sherin	Sherin	Sherin
14) Hari Prasad	a	a	a	a	a	a	a	a	a	a	a	a	a
15) Ajay Jay	a	a	a	a	a	a	a	a	a	a	a	a	a
16) Ganga V.S. Gopika Govind	a	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga	Ganga
17) Renin Shais	a	Renin	Renin	a	a	a	a	a	a	a	a	a	a
18) VISHAL PAULY VIJAY	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal
19) BHAVYALAKSHMI PM	Bhavya	Bhavya	a	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya	Bhavya
20) Gopika Prasad	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika	Gopika
21) Adnold Alvi	a	a	a	a	a	a	a	a	a	a	a	a	a
22) Anju Sudheesh	Anju	Anju	Anju	Anju	Anju	Anju	Anju	Anju	Anju	Anju	Anju	Anju	a
23) Neisy D'souza	Neisy	a	Neisy	Neisy	Neisy	Neisy	a	Neisy	Neisy	Neisy	Neisy	Neisy	Neisy
24) Ann Mary Tinay	a	Ann	Ann	Ann	Ann	Ann	Ann	a	a	Ann	a	Ann	Ann
25) D Andrew	a	a	a	a	a	a	a	a	a	a	a	a	a
No. Present	17	20	17	19	19	18	16	14	18	16	18	15	18
Initials of Teacher	DMT	DMT	SMC	AMM	Mock Test	JPI	AMM	STM	STM	VKP	DMD	MTJ	JPI
Signature of Teacher	DMT			AMM		JPI	AMM				DMD		
											Mock Test		

Sl. No.	Name of Student	Marks				Total (out of 10)	Faculty	No. of sessions
		12/02/2020	17/02/2020	18/2/2020	19/2/2020			
1	Fazween. A	2	2	2	2			
2	Sandra. P.GI	7	7	7	7	SMC.	2.	
3	Niruna V.J	7	7	7	a	JMJ.	3	
4	SARANYA S	6	6	6	a	DMD	3.	
5	JENIFER JOHNSON	4	4	4	a.	DMT.	750 3	
6	Maryshine Thomson	0	0	0	0	BMM.	750 3	
7	Angel Mary	4	4	4	a	MIJ.	750 3	
8	HARITHA. C.P.	3	3	3	3	SMD	500 2	
9	AMRITHA MARY P.J	9	9	9	a	JPY.	750 3.	
10	Gopika Girind.	a	a	a	a	STM	500 2.	
11	Navaneeth.K	7	7	7	7	VKP.	500 2	
12	Nygil.	a	6	6	6			
13	Shruti Raj-s	9	9	9	9		<u>4500</u>	
14	Hari Prasad	a	a	a	a			
15	Ajay Jay.	a	a	a	a			
16	GANGA VS	4	4	4	4			
17	Renu Shaji	a	a	a	a			
18	Vishal Pauly Vijay.	5	5	5	5			
19	BHAVYALAKSHMI PM	4	4	4	4			
20	GODIKA PRASAD	3	3	3	3			
21	Adnold Alis.	a	a	a	a			
22	Anju Sudbeesh	1	1	1	1			
23	Nessy D'SOUZA	1	1	1	1			
24	Anon Mary Tincy	1	1	1	1			
25	D Anderson	a	a	a	a			
No: Present		18	17	17	16.			
		(25)	(26)	(27)				
		VKP	SMD	SMD.				

ST ALBERT'S COLLEGE (AUTONOMOUS), ERNAKULAM



Department of Mathematics

PRESENTS

German Language Classes

Under the guidance of Br. Alphin

Class Starts On 27th June, 2019

*Classes on Tuesdays
and Wednesdays
Time :- 2pm - 3.30 pm*

*For Further details,
Contact :- 8330887775*

SYLLABUS
GERMAN LANGUAGE COACHING CLASS

Course objectives:

Demonstrate a basic level of communicative proficiency in the German language.

Interact and negotiate meaning in spoken and written conversations to share information, reactions, feelings, and opinions.

Course outcomes:

Students can engage in cross-cultural dialogue and experiences through participation in curricular, co-curricular, and/or study abroad programs.

Total Hours : 9 x 2 = 18

DAY 1	Greetings and German alphabets
DAY 2	Self introduction
DAY 3	Common verbs
DAY 4	Time
DAY 5	Numbers and dates
DAY 6	Sentence structure
DAY 7	Question words and tenses
DAY 8	Usage of haben, sein
DAY 9	Diary writing

ATTENDANCE SHEET FOR GERMAN LANGUAGE CLASS 2019

Sl.No.	Name of student	27-06-2019	02-07-2019	03-07-2019	12-07-2019	10-07-2019	16-07-2019	17-07-2019	23-07-2019	24-07-2019	30-07-2019	31-07-2019
✓ 1	Derina Shine D'silva	<i>Derina</i>	<i>Derina</i>	<i>Derina</i>	<i>Derina</i>		<i>Derina</i>	<i>Derina</i>	<i>Derina</i>	<i>Derina</i>		
2	Anu Maria Sunil	<i>Anu</i>	<i>Anu</i>	<i>Anu</i>	<i>Anu</i>		<i>Anu</i>		<i>Anu</i>	<i>Anu</i>		
✓ 3	Treesa Taniya P.A.	<i>Treesa</i>	<i>Treesa</i>	<i>Treesa</i>			<i>Treesa</i>	<i>Treesa</i>	<i>Treesa</i>	<i>Treesa</i>		
4	Ann Mary Teena K.S.	<i>Ann Mary</i>	<i>Ann Mary</i>				<i>Ann Mary</i>	<i>Ann Mary</i>	<i>Ann Mary</i>	<i>Ann Mary</i>		
5	Riya Roy											
6	Riya Biju											
7	Sandra Sudheer											
8	Gilna P.X.											
9	Roshna Jomon											
✓ 10	Meenu Florance	<i>Meenu</i>		<i>Meenu</i>	<i>Meenu</i>				<i>Meenu</i>	<i>Meenu</i>		
11	Alaine Mary											
✓ 12	Thomas Jipson paiva	<i>Thomas</i>		<i>Thomas</i>	<i>Thomas</i>	<i>Thomas</i>	<i>Thomas</i>	<i>Thomas</i>		<i>Thomas</i>		
✓ 13	Fathima Thasleem M.S.		<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>	<i>Fathima</i>		
✓ 14	Reichal Roy		<i>Reichal</i>	<i>Reichal</i>	<i>Reichal</i>		<i>Reichal</i>	<i>Reichal</i>		<i>Reichal</i>		
15	Daniel George John			<i>Daniel</i>	<i>Daniel</i>		<i>Daniel</i>		<i>Daniel</i>			
16	Sayin Sebastian			<i>Sayin</i>			<i>Sayin</i>		<i>Sayin</i>			
17	Kishno S Babu			<i>Kishno</i>	<i>Kishno</i>	<i>Kishno</i>		<i>Kishno</i>				
✓ 18	Sandra Sasidharan	<i>Sandra</i>	<i>Sandra</i>	<i>Sandra</i>	<i>Sandra</i>	<i>Sandra</i>			<i>Sandra</i>	<i>Sandra</i>		
✓ 19	Aleesha K Raju	<i>Aleesha</i>	<i>Aleesha</i>	<i>Aleesha</i>	<i>Aleesha</i>	<i>Aleesha</i>			<i>Aleesha</i>	<i>Aleesha</i>		
20	Jena Paul	<i>Jena</i>	<i>Jena</i>	<i>Jena</i>			<i>Jena</i>			<i>Jena</i>		
21	TRESA HELNA EDWIN											
22	NIVEDITHA MENON											
23	APARNA XAVIER											
24	NAHLAH NAZREEN											
25	Aarathi Saleef		<i>Aarathi</i>		<i>Aarathi</i>		<i>Aarathi</i>	<i>Aarathi</i>		<i>Aarathi</i>		
26	Jipra James.						<i>Jipra</i>	<i>Jipra</i>		<i>Jipra</i>		