ONLINE ADD-ON COURSES

SESSION 2021-22

KANDI RAJ COLLEGE

KANDI, MURSHIDABAD, 742137

From the desk of the Principal

Based on the recommendations of the Internal Quality Assurance Cell of our college, we had introduced several Value-added (Add-on) courses in our college (conducted in online mode) last year. Boasted by the success of those courses, this year, we are again introducing a host of new courses across different disciplines.

Last year, at the initial stage, only seven courses were introduced. This time around we have expanded our range, offering a total of eleven value-added courses for our students.

Hopefully, this time also, the students will embrace these new courses and in turn will add new skills to their existing skill-sets.

Soma Datta.

Principal
Kandi Raj College
Kandi, Murshidabad, Pin: 742137

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Content **Page no.**

Add-on Course on:

বাংলা কবিতা আবৃত্তি কর্মশালা

Course coordinator:

1. ড তাপস বন্দ্যোপাধ্যায়
2. (9434228814)ও অধ্যাপক সুস্মিতা ঠাকুর (9593493060)

Introduction To The Course:

বাংলা কবিতার সঠিক পাঠরীতি, ছন্দ ও যথার্থ ভাবপ্রকাশ সম্বন্ধে ধারণা লাভ করা।

Outcome:

আবৃত্তি শিক্ষার ফলে শিক্ষার্থীরা সঠিকভাবে কবিতা পাঠ শিখবে এবং ভবিষ্যতে এই সম্বন্ধে অন্যদেরকে শেখাতে পারবে। ছাত্র ছাত্রীরা ভবিষ্যতে আবৃত্তি শিল্পকে পেশা হিসেবে গ্রহণ করতে পারবে।

Date & Mode:

10/11/2021—24/12/2021 (ONLINE)

Course fee:

nil

How to apply:

contact course coordinator

Student of 1st & 3rd Sem

Who can apply:

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Syllabus:

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কবিতার সংজ্ঞা, ছন্দ – মাত্রা- দল, কলা, উচ্চারণ রীতি, কাব্য তত্ত্ব ও কবিতার শ্রেণী, কবিতার পাঠরীতি, কয়েকটি কবিতার আদর্শ আবৃত্তি ।

Study materials & References:

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১। ***বিষয়ঃ আবৃত্তি-*** দেবদুলাল বন্দ্যোপাধ্যায়, অমিয় চট্টোপাধ্যায়, দেজ পাবলিশিং, কলকাতা।

২। ***আবৃত্তিকোষ*** – নীরদবরণ হাজরা, দেজ পাবলিশিং, কলকাতা।

৩। ***কবিতার ক্লাস-*** নীরেন্দ্রনাথ চক্রবর্তী, নবযুগ প্রকাশনী, কলকাতা।

৪। ***নূতন ছন্দ পরিক্রমা-*** প্রবোধচন্দ্র সেন, আনন্দ, কলকাতা।

Add-on Course on:

Laboratory Safety and Standards Precautions

Course coordinator:

Dr. Rangana Sinha, Assistant Professor and Head, Department of Chemistry, Kandi Raj College

email: ranganasinha69@gmail.com, Contact number: 9477144694

Introduction To The Course:

In this course, basic concepts of **Laboratory Safety and Standards Precautions** have been introduced at first. Chemistry laboratories can be hazardous if the rules are not followed. During a chemistry course a student may handle materials which are carcinogenic, poisonous, flammable, and explosive. Some of these materials and equipment may also cause severe burns, cuts, or bruises if handled improperly or carelessly. Most accidents that occur in the chemistry laboratory are a result of carelessness, impatience, improper or unauthorized experimentation, and disregard for safety rules or proper operating procedures. In order to minimize the chances of an accident in the laboratory certain rules and regulations must be obeyed at all times when one is working or observing in a chemical laboratory. Therefore, it is not advisable for anyone to work in a laboratory without proper knowledge of the dangers involved.

Module 1 deals with Introduction of general laboratory safety, emergency management and waste management. Chemical safety, bio safety, compressed gas safety and fume hood safety are important for regular laboratory activity. Personal protective equipments like Gloves, Masks, Caps, Gown and Aprons are also important for smooth running of a laboratory. Common symbols and signs used in laboratories should be known by all. Fire safety and preventing fire accidents in the laboratory must be explained to the students. Before starting to work in a laboratory, students must be familiarized with the hazards of the materials in the lab, as well as appropriate safe handling, storage and emergency protocols. Long hair and loose clothing must be confined while in a laboratory.

Closed shoes with socks must be worn at ALL times – open-toed shoes, backless shoes, sling backs, clogs, and sandals are not permitted. Students should know

the location and proper use of fire extinguishers, fire blankets, safety showers, eye wash devices, and first aid kits. Eating, smoking, and drinking are not allowed

in a chemistry laboratory. Before leaving the laboratory Students must turn off gas, water, electricity, vacuum and compression lines and heating apparatus. All

the all waste material should be disposed and protective clothing (lab coats, gloves, etc.) should be left behind when leaving the laboratory.

In Module 2, Personal Protective equipments and their uses for protection of eye and face, Head, hand protection to be explained. Proper uses of Gloves,

Masks, Caps, Gown, goggles and Aprons are to be demonstrated. When a chemical goes in eyes, eyes should be immediately rinsed with large quantities of water.

Fume hoods should be used when toxic or irritating vapours are involved. Hands should be thoroughly washed after leaving the laboratory. Glassware should be

handled with care and Glassware that has been rinsed with an organic solvent should be rinsed with distilled water before it is placed in a drying oven. All chipped

or cracked glassware should be discarded in appropriate containers. A dustpan and brush, not hands, must be used to pick up broken glass. Broken glass should be

discarded in a rigid container separate from regular garbage and should be labelled appropriately.

Module 3 deals with Chemical safety, Biological safety and waste management. Students must learn to handle chemicals which are carcinogenic, poisonous, flammable, and explosive and properly store them. Before obtaining any chemicals the label on the reagent bottles should be carefully read. For Biological safety, glass and plastic centrifuge tubes must be checked for stresslines, hairline cracks and chipped rims before use. Unbreakable tubes must be used whenever possible. In Case of incidents or accidents, students must know the location and proper use of fire extinguishers, fire blankets, safety showers, eye wash devices, and first aid kits. Proper Handling of disposable/ sterile item before use must be ensured.

Outcome:

We hope, as an outcome of this course, undergraduate students will gain knowledge and experience in **General Chemistry Laboratory Safety and Standards Precautions** for their higher education and future research purpose. Students will learn to work safely in any laboratory/workplace. They will be able to use Personal protective equipment for eye and face protection, Head protection and hand protection. Students will learn to understand signages and follow all safety precautions. They will learn to safely handle, store, use and dispose waste. They will learn Do's and Don'ts in the laboratory and will be able to work alone in the laboratory. They will be able to conduct trainings to ensure safety in laboratories.

Date & Mode:

10/11/21-05/12/21 online mode

Course fee:

nil

How to apply

contact course coordinator

Who can apply:

Student of 1st & 3rd Sem

Syllabus:

MODULE 1

UNIT 1: Introduction: safety training, general lab safety, emergency management and waste management.

UNIT 2: Chemical safety, bio safety, radiation safety, compressed gas safety and fume hood safety.

UNIT 3: Personal protective equipment, electrical safety and clean room safety.

UNIT 4: **Administrative controls, orientation and training, and standard operating procedures safety signs.**

UNIT 5: **Procedural controls, housekeeping, Do's and Don'ts in the laboratory and working alone**

MODULE 2

UNIT 1: Personal Protective equipments: Introduction, hazard assessment, eye and face protection.

UNIT 2: **Head protection, hand protection and protective clothing.**

UNIT 3: **Respiratory protection, hearing protection and foot protection.**

UNIT 4: **Glass ware, glassware inspection, safe handling and storage, working with glasswares.**

UNIT 5: **Vacuum and pressure operations, cleaning and drying glasswares, disposal and spill clean-up.**

UNIT 1: Chemical safety, chemical exposure and monitoring.

UNIT 2: Chemical storage guidelines.

UNIT 3: Biological safety and Biological safety levels.

UNIT 4: Clean room safety, introduction to waste management, chemical waste disposal.

UNIT 5: Biological waste disposal, glass disposal, response to incidents and accidents

Serial no	Module	No. of lecture (2 hours per lecture)	Resource person
1	1	5	Dr Anindita Shit
2	2	5	Dr Pradip Bera
3	3	5	Dr. Niladri Sarkar

Study materials & References:	**Will be provided during course**

Add-on Course on:

Film Adaptation

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Course coordinator:

Mrs. Mousumi Das, Assistant Professor and Head, Department of English, Kandi Raj College, mob: 9474660575

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Introduction To The Course:

"Film is a form of writing which draws on other forms of writing" writes Robert Stam. From the earliest years of cinema, film has drawn on literary and theatrical sources. The critical study of film adaptation has grown significantly in recent years, moving beyond a narrow focus on fidelity to open up productive questions of the complex relations between copy and original, and of the nature of intertextualities.

The course will take an expanded approach to the question of adaptation, seeing film as not simply based on literary antecedents but as an art form which draws on other forms of art. It will consider movements across genres ¿ from literary classics to comic books ¿ and across historical periods and geographical spaces.

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Outcome:

Students will be introduced to the critical study of film adaptation.
Students will learn to think critically about the migration of stories and ideas across different historical, geographical and generic locations.
Students will gain experience of analysing a diverse selection of moving image texts.
Students will learn to assess and evaluate the uses of a range of critical tools in the study of adaptation

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Date & Mode:

11/11/21-16/12/21 (Online mode)

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Course fee:

Nil

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How to apply:

contact course coordinator

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Who can apply:

Student of 1st & 3rd Sem

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Syllabus:

i. Introducing Film Adaptation

ii. An overview of Indian cinemas and western cinemas

iii. Relevant Theories

iv. Adaptation of western texts in Indian cinema

v. Adaptation of western text in western cinema

vi. Adaptation of Indian text in Indian cinema

Serial no	Unit/Module	No. of lecture	Resource person
1.	. Introducing Film Adaptation	03	Mousumi Das
2.	. An overview of Indian cinemas and western cinemas	02	Mousumi Das
3.	Relevant Theories	03	Mousumi Das
4.	. Adaptation of western texts in Indian cinema	02	Piyali Sarkar
5.	. Adaptation of western text in western cinema	02	Piyali Sarkar
6.	Adaptation of Indian text in Indian cinema	03	Piyali Sarkar

Add-on Course on:

Aspects of Ancient Indian Art and Architecture

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Course coordinator:

Mr. Pankaj kr. Das, Assistant Professor and Head, Department of History, Kandi Raj College, Mob: 9434813790

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Introduction To The Course:

The culture and History of India's dynamic, unique and intriguing. It is amongst the first civilizations to have come into existence. Historical records trace the beginning of this great nation to the Indus valley civilisation, which was one of the oldest known civilisations in the world. It will also help the students to establish a link between culture and heritage.

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Outcome:

The participants will be able to learn: 1. To teach the learners to pay honour to great Indian culture and implement value sense in livelihood. 2. To acquaint the learners with the great contributors of our ancestors in the areas of Philosophy, Science, Art, Music, Architecture etc. 3. To establish a link between culture and heritage

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Date & Mode:

10/11/21-24/12/21 (Online Mode)

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Course fee:

Nil

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contact course coordinator

How to apply:

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Who can apply:

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Student of 1st & 3rd Sem

Syllabus:

Serial no	Unit/Module	No. of lecture	Resource person
1	What is Art and Architecture?	one	Pankaj kr. Das
2	Sculptures of the Indus valley civilization	one	Sumit Chowdhury
3	*Mouryan* Art and Modern Painting	one	Pankaj kr. Das
4	Early *Buddhist* Sculptures	one	Amrita Biswas
5	Emergence of regional Art and Architecture	one	Amrita Biswas
6	*Gandhara* Art Technology	one	Amrita Biswas
7	*Mathura* Art Technology	one	Sumit Chowdhury
8	*Saranath* School of Art	0ne	Pankaj kr. Das
9	Impact of *Pala* and *Sena* Art	one	Sumit Chowdhury
10	Hindu Temple Architecture and modern Science	one	Pankaj kr. Das

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Study materials & References

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Will be provided during course.

Add-on Course on:

A Short Course in Discrete Mathematics

Course coordinator:

Mr. **Jayanta Basu**, Assistant Professor and Head, Department of Mathematics, Kandi Raj College 9433424776; basujayanta0@gmail.com

Introduction To The Course:

This course aims at introducing the concepts of lattices, Boolean algebras, switching circuits and graph theory. The course discusses some important applications of Boolean algebra and graph theory in real life situations through switching circuits and shortest path algorithms.

Outcome:

After the course the student will be able to understand the concepts of (a) lattices and their types; (b) Boolean algebra, switching circuits and their applications; (c) graphs, their types, and applications in study of shortest path algorithms.

Date & Mode:

15/11/21-16/12/21 (online)

Course fee:

nil

How to apply:

contact course coordinator

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Who can apply:

Student of 1st & 3rd Sem

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Syllabus:

Sl.	Unit	Content	No. of Lectures	Resource Person
1	01	Definitions, Examples, and basic properties of ordered sets, Order isomorphism, Hasse diagrams, Dual of an ordered set, Duality principle, Maximal and minimal elements	05	Dr. Bandhu Prasad
2	02	Lattices as ordered sets, Lattices as algebraic structures, Sublattices	05	Jayanta Basu
3	03	Boolean Algebras, De Morgan's laws, Boolean homomorphism, Representation theorem, Boolean polynomial functions	05	Dr. Bandhu Prasad
4	04	Disjunctive normal form and conjunctive normal form, Minimal forms of Boolean polynomial, Karnaugh diagrams, Switching circuits and applications of switching circuits	05	Jayanta Basu
5	05	Introduction to graphs, Konigsberg Bridge problem, Definition, examples and basic properties of graphs, Subgraphs, Pseudographs, Complete graphs, Bipartite graphs, Isomorphism of graphs, Paths and circuits	05	Dr. Bandhu Prasad
6	06	Eulerian circuits, Hamiltonian cycles, Adjacency matrix, Weighted graph, Travelling salesman problem, Shortest path, Dijkstra's algorithm.	05	Jayanta Basu

Study materials & References:

1. Davey, B. A., & Priestley, H. A. (2002). Introduction to lattices and order (2nd ed.). Cambridge University press, Cambridge
2. Goodaire, Edgar G., & Parmenter, Michael M. (2011). Discrete Mathematics with graph theory (3rd ed.). Pearson Education (Singapore) Pvt. Ltd. Indian Reprint.
3. Lidl, Rudolf & Pilz, Gunter. (2004). Applied Abstract Algebra (2nd ed.), Undergraduate Texts in Mathematics. Springer (SIE). Indian Reprint.
4. Rosen, Kenneth H. (2012). Discrete Mathematics and its applications, with combinatorics and graph theory. (7th ed.). McGraw Hill Education. Indian Reprint

Add-on Course on:

Black holes Fundamentals

Course coordinator:

Dr. Atanu Kumar Das and Mr. Abhijit Dutta, Assistant Professor, Department of Physics, Kandi Raj College

Introduction To The Course:

In this course the syllabus will cover a brief concept of black holes and its existence. This course also includes the life and death of star. This course is intended to introduce students to the predicted properties of black holes and the astronomical evidence for their existence. Along the way we will study modern ideas about the nature of space, time, and gravity.

Outcome:

After completing this course, a student will be able to:

- understand the essential characteristics of black holes i.e. it's birth, nature, fate etc.
- understand how recent research is going on black hole properties and its connection with Thermodynamics.
- Compare different types of black holes in scientific approach to distinguish them from science fiction.
- Describe the connection of basic concepts of physics i.e. gravity, special and general relativity, and quantum mechanics with black hole properties.
- Recognize different types of stars and distinguish which stars can potentially approaches black holes.
- Characterize the formation of theories associated with each type of black holes.
- Identify different ways of detecting black holes with appropriate technologies.

Date & Mode:

12/11/21-07/01/22 (Online Mode)

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Course fee:

nil

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How to apply:

contact course coordinator

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Who can apply:

Student of 1st & 3rd Sem

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Syllabus:

Serial no	Unit/Module	No. of lecture	Resource person
1	Introduction to Black Holes	(1L)	Dr. Atanu Kumar Das
2	Life and Death of a Star	(1L)	Dr. Atanu Kumar Das
3	The Structure of Space-time	(1L)	Dr. Atanu Kumar Das
4	Approaching a Black Hole	(1L)	Dr. Atanu Kumar Das
5	Crossing of Event Horizon	(1L)	Dr. Atanu Kumar Das
6	Inside a Black Hole	(1L)	Dr. Atanu Kumar Das
7	Detection of Black Holes	(1L)	Dr. Atanu Kumar Das
8	Characteristics of Black Hole	(1L)	Mr. Abhijit Dutta
9	Background Physics on evolution of a Black Hole	(1L)	Mr. Abhijit Dutta
10.	Dependency on Relativity, Gravity	(1L)	Mr. Abhijit Dutta

11.	Connections with Quantum Physics and Thermodynamics	(2L)	Mr. Abhijit Dutta
12.	Thermal Properties of a Black Hole	(2L)	Mr. Abhijit Dutta
13.	Radiation and its fate	(1L)	Mr. Abhijit Dutta

Study materials & References:

1. https://en.wikipedia.org/wiki/Black_hole#:~:text=A%20black%20hole%20is%20a,to%20form%20a%20black%20hole.

2. T. P. Sotiriou, *Class. Quantum Grav.* **32** , 214002, *2015.*

3. C. DE MARIA, H. Maceti, I. J, Lautenschleguer **4** 505 2015.

Add-on Course on:

Gīta: Controlling the mind

Course coordinator:

Mr. SUPRIYA ROY Assistant Professor and Head, Department of Sanskrit, Kandi Raj College, Mob: 9093765087

Introduction To The Course:

The Bhagavadgita puts a great emphasis on the control of the mind. The mind is likened to the sixth sense, and described as fickle and unstable by nature. As an aspect of Nature, the human mind personifies the phenomenal world, its impermanance and instability

Outcome:

The purpose of practicing eightfold *yoga* is to control the mind in order to make it a friend in discharging the human mission. Unless the mind is controlled, the practice of *yoga* (for show) is simply a waste of time. One who cannot control his mind lives always with the greatest enemy, and thus his life and its mission are spoiled. The constitutional position of the living entity is to carry out the order of the superior. As long as one's mind remains an unconquered enemy, one has to serve the dictations of lust, anger, avarice, illusion, etc. But when the mind is conquered, one voluntarily agrees to abide by the dictation of the Personality of Godhead, who is situated within the heart of everyone as Paramātmā. Real *yoga* practice entails meeting the Paramātmā within the heart and then following His dictation. For one who takes to Kṛṣṇa consciousness directly, perfect surrender to the dictation of the Lord follows automatically**.**

Date & Mode:

: 10/11/21-16/12/21 (Online Mode)

Course fee:

nil

How to apply:

contact course coordinator

Who can apply:

Student of 1st & 3rd Sem

Syllabus:

1. **Introduction to Bhagavad Gita .**
2. **Brief storyline of Mahabharata - Context of Kurukshetra War.**
3. **Nature of conflict .**
4. **Weakness of mind .**
5. **Means of controlling the mind Meditation– difficulties .**
6. **Balanced life.**
7. **Physical and mental discipline.**
8. **Clarity of buddhi .**
9. **Control over senses.**
10. **Process of decision making.**

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Serial no	Unit/Module	No. of lecture	Resource person
1	**Introduction to Bhagavad Gita .**	**One**	Supriya Roy
2	**Brief storyline of Mahabharata - Context of Kurukshetra War.**	**One**	Sukanya Sarkar
3	**Nature of conflict .**	**One**	Goutam Chatterjee
4	**Weakness of mind .**	**One**	Chumki Pal
5	**Means of controlling the mind Meditation– difficulties .**	**One**	Supriya Roy
6	**Balanced life.**	**One**	Sukanya Sarkar

7	**Physical and mental discipline.**	**One**	Goutam Chatterjee
8	**Clarity of buddhi .**	**One**	Chumki Pal
9	**Control over senses.**	**One**	Supriya Roy
10	**Process of decision making.**	**One**	Sukanya Sarkar

Study materials & References:

Will be provided during course

Add-on Course on:

Personality Development

Course coordinator:

Mr. Srimonta Mondal, Assistant Professor and Head, Department of Philosophy, Kandi Raj College, Mob: 8617434002

Introduction To The Course:

This course helps students to improve and learn to understand personality traits and Positive attitude. It improves soft skills like Personality development, Communication Skill, Develop workplace etiquette. Self-confidence & Body language

Outcome:

The Personality Development Course polish & improves students' presentation and communication skills. The course will help them to groom their personality and deal with people effectively. During the course students also receive focused guidance on persona management, grooming, health and soft skills.

Date & Mode:

13/11/21-14/12/21 online mode

Course fee:

nil

How to apply:

contact course coordinator

Who can apply:

Student of 1st & 3rd Sem

Syllabus:

Unit-1: Define Personality, Determinants of Personality Development.
Unit-2: Factors of Association, Relationship, Personality Traits, Developing effective Habits.
Unit- 3: Motivation, Introspection, Self-Appraisal & Self-development.
Unit- 4: Type of Personality – Introvert, Extrovert, & Ambivert Person. Effective communication & its key aspects. Decision making Skill & Leadership Qualities.
Unit-5: Interpersonal Relationship, Personality – Spiritual Journey beyond the management of change. Good manners & Etiquettes, Effective Speech, Understanding and projecting positive Body language.

Unit- 6: Attitude & develop positive Attitude, Stress Management, causes of Stress & technique to manage it. Time management and its importance. Time Management Styles.

Serial no	Unit/Module	No. of lecture	Resource person
1	Unit-1	01	Srimonta Mondal
2	Unit-2	02	Rabual Haque
3	Unit-3	02	Suprabhat Chudhury
4	Unit-4	03	Sharbori Ghosh
5	Unit-5	04	Dr.Nasiruddin Mondal
6	Unit-6	03	Srimonta Mondal

Study materials & References:

Will be provided during course.

Add-on Course on:

Ecology and Conservation of Coral reefs

Course coordinator:

Sarbananda Mondal, SACT and Head, Department of Geography, Kandi Raj College; Mob: 9932225382

Introduction To The Course:

A brief discusses on components, ecological conditions for the growth of Coral reefs. The discipline which elaborate characteristics and classification of Coral reefs. Different types of Coral reef situated in the Oceans. Mainly the subsidence theory by Charles Darwin and Stand still theory by Murray describe that how the Coral reef are formed. Coral bleaching is a main problem for destroying the Coral reefs

Outcome:

The study of Coral reefs is Coral ecology. It is very important as it provides many information about the environment which is favourable for Coral formation, the area of Coral reefs, environmental problem related to coral and many more

Date & Mode:

13th Nov to 18 Dec 2021 (Online Mode)

Course fee:

nil

How to apply:

contact course coordinator

Who can apply: **Student of 1st & 3rd Sem**

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Syllabus:

Serial no	Unit/Module	No. of lecture	Resource person
1	Components of Coral Reef	One	Shakya Sinha
2	Ecological condition for the growth of Coral Reefs	One	Sarbananda Mondal
3	Classification of Coral Reefs	One	Saheli Banu
4	Subsidence theory	One	Madhuparna Sarkar
5	Stand still theory	One	Sarbananda Mondal
6	Coral reef ecology	One	Shakya Sinha
7	Threats of Coral Reefs	One	Madhuparna Sarkar
8	Coral Bleaching	One	Saheli Banu
9	Coral Reef recovery and Restoration	One	Shakya Sinha
10	Conservation of Coral Reefs	One	Saheli Banu

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Study materials & References:

1. Agardy, M. T (1994). Advance in marine conservation: the role of marine protected areas. Trends in Ecology and Evolution 9:267-270.
2. Allen, G. R. and R. Steene (1994). Indo Pacific Coral Reef Field Guide. Singapore: Tropical Reef Research, 378 pp.
3. Bruckner, A (2006). New Threat to Coral Reefs: Trade in Coral organism

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Add-on Course on:

ICT and Blended Learning: Introducing a Novel Approach

Course coordinator:

Mithu Mitra , SACT and Head, Department of Education, Kandi Raj College; Mob: 9002157070

Introduction To The Course:

This course is designed for students who are facing challenges as use of ICT and Blended mode of learning has tremendously been increased. This course would further enhance their skills in the use of ICT in classroom. Students' learning, technological skills would be increased with their creativity across the disciplines. Upon completion of the course, participants will be more confident to incorporate ICT tools during Blended mode of learning. This will promote students' creativity and motivation, resulting in more engagement with this novel mode and coping with the challenges.

Outcome:

This course will help the participants to understand how to :

- Use ICTs during learning process.
- Manage online materials for learning.
- Skilfully use online learning applications.
- Become creative by using ICT.
- Conduct online activities regarding their requirements.
- Effectively perform in Blended Mode.
- Combine online educational materials and opportunities for interaction online with traditional classroom methods.
- Gain overall concept on Blended Learning and ICT based Education.

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Date & Mode:

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Course fee:

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How to apply:

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Who can apply:

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Syllabus:

14TH Nov to 23th Dec.2021 (Online Mode)

nil

contact course coordinator

Student of 1st & 3rd Sem

Serial no	Unit/Module	No. of lecture	Resource person
1	Introduction and Lecture on Blended Learning and its significance.	One	Sumantra Chakraborty
2	Educational Technology and its importance.	One	Masadul Ansary
3	Modern Trends in ICT	One	Mithu Mitra
4	Use of online learning applications (hand on activities).	One	Israil Shaikh
5	Online content surfing and use of online materials.	One	Sumantra Chakraborty
6	Integrating technology and Digital media with traditional activities.	One	Masadul Ansary
7	Impact of ICT on Blended Learning: prospects and challenges.	One	Mithu Mitra
8	Application of Blended mode in classroom environment.	One	Israil Shaikh

9	Doubt clearing session.	One	Sumantra Chakraborty
10	Concluding session, providing necessary materials.	One	Masadul Ansary

Study materials & References:

- Muthuchamy. I., Thiyagu. K. Technology and Teaching: Learning Skill. Kalpaz publication. 2011.
- Mangal, S.K., Mangal, U. Essentials of Educational Technology. PHI publication. 2016.
- Agarwal, J.C. Essentials of Educational Technology. www.bookmandelhi.com . (2nd edn.).2015.
-
- Mrunalini, T., Ramakrishna, A. ICT in Education. 2018. Neelkamal publication.
- https://openbooks.col.org/blendedlearning/chapter/chapter-1-blended-learning/
- https://openbooks.col.org/blendedlearning/chapter/chapter-1-blended-learning/
- https://files.eric.ed.gov/fulltext/EJ1124666.pdf

Add-on Course on:

ETHNOBOTANICAL STUDY OF PLANTS AND THEIR USES

Course coordinator:

Dr. Chandan Kr Jana, Assistant Professor and Head, Department of Botany, Kandi Raj College Mob: 9002737276

Ms. Dipanwita Pal

Introduction To The Course:

* Identify the medicinal plants from the pharmacognostic preparations

* Distinguish between the adulterants and authentic pharmacognostic preparations
* Elucidate the chemical constituents of medicinal plants
*Recognize in situ and ex situ conservation of various medicinal plants.
*Create awareness for utilization of herbal medicines for home remedies.
*Increase public awareness about the efficacies of herbal drugs and their intellectual property rights.
*Implement suitable methods for the cultivation of more and more wild indigenous and endemic medicinal plants.

Outcome:	•To promote conservation strategies recommended by various agencies. •To understand the medicinal values of various parts of the medicinal plants. •To understand the present scenario on marketing of medicinal plants.
Date & Mode:	**13/11/21-15/12/21 (Online Mode)**
Course fee:	**nil**
How to apply:	**contact course coordinator**
Who can apply:	**Student of 1st & 3rd Sem**
Syllabus:	Unit 1: Pharmacognosy : Introduction (Definition; Drug – Crude and commercial); Preparation of drugs; Organoleptic study of drugs; Physical and chemical evaluation of drugs; Classification of drug plants; Individual drugs; drug adulteration; constituents. Unit 2: Study of following drug plants (Botanical name with family, source, short description, histology, constituents, uses, adulterants): *Swertia chirata, Andrographis paniculata, Justicia adhatoda, Aloe barbedensis, Centella asiatica, Ephedra gerardiana, Zingiber officinale, Rauvolfia serpentina,*

Alstonia scholaris, Mentha piperita, Dioscorea alata, Aconitum heterophyllum, Atropa belladonna, Hemidesmus indicus, Withania somnifera.

Serial no	Unit/Module	No. of lecture	Resource person
1	Unit 1.	6	Dr.Chandan Kumar Jana
2	Unit 2.	9	Ms. Dipanwita Pal

Study materials & References

Will be provided during course.

Add-on Course on:

ELECTRONIC GOVERNANCE OR E-GOVERNANCE

Course coordinator:

TIRTHA MUKHARJEE, PH NO-7076244001

Introduction To The Course:

Electronic governance or **e-governance** is the application of information technology for delivering government services, exchange of information, communication transactions, integration of various stand-alone systems between government to citizen (G2C), government-to-business (G2B), government-to-government (G2G), government-to-employees (G2E) as well as back-office processes and interactions within the entire governance framework. Through e-governance, government services are made available to citizens through IT. The three main target groups that can be distinguished in governance concepts are government, citizens, and businesses/interest groups. In e-governance, there are no distinct boundaries, finance and support. It will also helps the students who became a legal citizen of the country aware that how the governance works through E- Governance.

Outcome:

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The participants will be able to learn :

1- Inclusive government: E-Governance helps in building trust between governments and citizens.

2- Easy implementation: With e-governance paper work has been reduced and made simple.

3- Speedy process: Technology makes communication easier and speedier. Internet, phones, cell phones have reduced the time taken in normal communication. Through e-governance decision-making process of government will also fasten

4- Enabling Environment for promoting Economic development. 5-

Improving Public Administration .
6-Enhancing Transparency and accountability.
7- Be aware about public policy through e-governance

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Date & Mode:

15 Nov to 24th Dec.2021 (Online Mode)

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Course fee:

nil

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How to apply:

contact course coordinator

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Who can apply:

Student of 1st & 3rd Sem

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Syllabus:

Serial no	Unit/Module	No. of lecture	Resource person
1	What is E-Governance and type of e-governance	one	Tirtha Mukherjee
2	Pillars of E-governance	one	Animesh Chowdhury
3	E-governance-role and importance.	one	Animesh Chowdhury
4	Levels of e-governance	one	Monisha Saha

5	Benefits of e-governance	one	Monisha Saha
6	Advantages and Disadvantages of e-governance	one	Tirtha Mukherjee
7	Vison of e-governance, & applications models	one	Animesh Chowdhury
8	Implemented and limitations	0ne	Monisha Saha
9	Impact of e-governance & NEGP(National e-governance Plan)	one	Animesh Chowdhury
10	E-governance - Issue & Challenges	one	Monisha saha

Study materials & References

Will be provided during course.

Add-on Course on:

BIOFLOC FISH FARMING AND TECHNOLOGY

Course coordinator:

MR. AZAHAR UDDIN &MISS. CHUMKI MANDAL

1. Contact No.- 9609242664; 99593471544

Introduction To The Course:

Biofloc is an environment friendly aquaculture technique based on in-situ microorganism production. Biofloc is the suspended growth in ponds or tanks which is the aggregates of living and dead particulate organic matter, phytoplankton, bacteria and grazers of the bacteria.

Outcome:

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- It reduces environment impact.
- It enhances survival rate, growth performance, better feed conversion in the culture system of fish.
- It reduces utilization of protein rich feed and cost of standard feed.
- It reduces water pollution and also inhibit the risk of introduction and spread of pathogens.

Date & Mode:

15 Nov to 24th Dec.2021 (Online Mode)

Course fee:

nil

How to apply:

contact course coordinator

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Who can apply:

Student of 1st & 3rd Sem

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Syllabus:

Unit -1

Introduction, setting up the tank, Biofloc growth, Role of probiotics, Aeration, Species selection, C-N ratio optimization.

Unit-2

Importance of Biofloc, composition and nutritional value of Biofloc, control of Biofloc technology, control of water parameters, cleaning and harvesting.

Serial no	Unit/Module	No. of lecture	Resource person
1	Unit-1	7	Azahar Uddin
2	Unit-2	6	Chumki Mandal

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Study materials & References

Will be provided during course.

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Add-on Course on:

SCIENCE OF EXERCISE

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Course coordinator:

1. **MRS. ANAMIKA SAHA, MISS. BEBINA KHATUN & MISS. DEBLINA DAS**

Contact No.- 9474581022, 6295570391, 7384515894

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Introduction To The Course:

A short description of the course:Science of Exercise will have an improved physiological understanding of how your body responds to exercise, and will be able to identify behaviors, choices, and environments that impact our health and training. It will explore a number of significant adjustments required by our body in order to properly respond to the physical stress of exercise, including changes in carbohydrate, fat and protein metabolism, nutritional considerations, causes of muscle soreness & fatigue, and the effectiveness and dangers of performance enhancing drugs.

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Outcome:

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- It will challenge the students to apply this new knowledge via nutrition logs, heart rate monitoring, calculations of their total daily caloric expenditure and body mass index (BMI).
- Demonstrate an ability to effectively read, evaluate, and utilize research related to exercise science.
- Demonstrate a thorough understanding of the relationship between disease prevention and health promotion.
- Demonstrate comprehension of personal wellness and holistic health concepts.

- Develop skills to collaborate and consult as a member of the healthcare team
- Demonstrate an essential knowledge of movement anatomy and physiology, biomechanics, and motor skill refinement prior to graduation.
- Consider the unique characteristics and values of the individuals and approach assessment and treatment in a culturally sensitive manner.
- Think critically as demonstrated by participation in evidence-based practice and research.

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Date & Mode:

10^{th}NOV.to 24^{th} DEC. 2021 (Online Mode)

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Course fee:

nil

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How to apply:

contact course coordinator

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Who can apply:

Student of 1^{st} & 3^{rd} Sem

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Syllabus:

Unit -1

The Energetics of Exercise
2 hours
A. Introduction to Exercise Science B. Principles in Exercise Physiology C. Calorimetry & Oxygen Consumption D. ATP & Muscular Work E. Carbohydrate Metabolism During Exercise F. Carbohydrate Metabolism Continued G. Fat Metabolism During Exercise H. Protein Metabolism During Exercise

Unit-2

Physiological Systems During Exercise
2 hours

A. Skeletal Muscle Structure & Function B. Respiratory System Responses to Exercise C. Cardiovascular System Responses to Exercise D. Cardiovascular System Continued E. Endocrine System Responses to Exercise F. Endocrine System Continued G. Immune System Responses to Exercise

Unit-3

Exercise for Fitness & Performance
2 hours

A. Adaptations to Endurance Training B. Adaptations to Strength Training C. Nutritional Considerations for Exercise D. Causes of Muscle Fatigue E. Causes of Muscle Soreness F. Performance Enhancing Drugs G. Performance Enhancing Drugs Continued

Unit-4

Exercise in Health, Wellness and Disease
4 hours

A. Exercise is Medicine B. Diet, Exercise and Weight Control C. Exercise and Risk Factors for Heart Disease D. Exercise and Risk Factors for Diabetes E. Exercise and Risk Factors for Cancer F. Exercise and Successful Aging G. Exercise and Your Brain

Serial no	Unit/Module	No. of lecture	Resource person
1	Unit-1	2	Anamika Saha
2	Unit-2	2	Deblina Das
3	Unit-3	2	Bebina Khatun

4	Unit-4	4	Anamika Saha, Deblina Das, Bebina Khatun

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Study materials & References

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Will be provided during course.