



KERALA UNIVERSITY OF HEALTH SCIENCES

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No : 32478/2024/schools&Centres/KUHS

Date : 25-03-2025

NOTIFICATION

**School of Translational Health Sciences, KUHS
CERTIFICATE PROGRAMS AND TRAINING IN GENETICS**

Ref:- Notification No:32478/2024/schools&Centres/KUHS dated 10.02.2025.

As per the reference cited above, the last date of registration for the "Certificate Program in Basics of Genetics and Related Disorders" was 15.03.2025.

The last date is hereby extended upto 11.04.2025.

Back ground and description:

Advancements in the field of genetics are changing the landscape of health care system all over the world. KUHS, in its endeavour to keep abreast of the latest developments in this field, is offering a series of online programs for its faculty and PG students. In this program, there will be 2 series of online sessions and a hands-on training session. First series covers the basic concepts of genetics, inheritance and concerned disorders. At the end of first series, there will be an assessment which makes the participant eligible for admission to the second series of classes, which is optional. The second series covers developments in the field of genetics whereby they are put to use in diagnosis and treatment. After completion of both courses, eligible participants will be given hands –on training in basic molecular biology techniques for 3-4 days, in batches of 14 students each at School of Applied Animal roduction and Biotechnology (SAAPBT), College of Veterinary and Animal Sciences, Mannuthy, Thrissur.

Eligible candidates will be given certificates after successful completion of each course and assessment.

Programs included in the Series:

- I - Certificate program in Basics of genetics and related disorders (Online)
- II – Certificate program in Molecular biology techniques (Online) (details will be announced later)
- III – Hands-on Training on basic molecular biology techniques (details will be announced later)

CERTIFICATE PROGRAM IN BASICS OF GENETICS AND RELATED DISORDERS

Objective of the program:

To create awareness and empower the post-graduate students and faculties of affiliated colleges of KUHS with adequate knowledge in the basic concepts of genetics and related disorders.

Eligibility for admission : Faculty with FEP No. and Post graduate students with KUHS registration no. of any of the affiliated colleges of KUHS.

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Mode of class: Online – through Moodle platform.

Two recorded video classes will be uploaded every week. Doubts and questions from participants can be cleared by posting questions in Discussion group. The participant can move on to a subsequent module only after completion of the previous module.

Duration of program – 6 months (25 hours)

Date of commencement of the program – April 2025

Registration for the course – Log on to www.kuhs.ac.in.

Fees – Rs. 3,000/-

Topics include:

Module 1 – Biochemistry of Nucleotides - Purines, Pyrimidines, Nucleosides, Nucleotides, Nucleic Acids

Module 2 – DNA - structure, organization & types, difference between DNA & RNA, Mitochondrial DNA

Module 3 – RNA - types & functions, structure of various RNAs

Module 4 – Genes - introns, exons, coding & non coding sequences, repeated sequences, transposons

Module 5 – Chromosomes - Organization of chromosomes, Types & structure of chromosome, telomere

Module 6 – Replication of DNA - Cell cycle, DNA Replication in prokaryotes, DNA Replication in eukaryotes, DNA Repair

Module 7 - Transcription of genes - Transcription of genes, Post transcriptional modifications, inhibition of transcription

Module 8 - Translation - Genetic Code, how to Read a Codon Chart, Steps & Process of Translation, Post-Translational Modification of Proteins, Protein folding, targeting

Module 9 - Structures of Proteins

Module 10 –Regulation of gene expression - in prokaryotes, in eukaryotes

Module 11 –Mitosis, Meiosis

Module 12 - Inheritance of genes - alleles, loci, Traits, Phenotype, Genotype, zygosity

Module 13 –Variations of genes, linked genes, crossing –over, Recombination

Module 14 –Mutations – types, Causes & Effects

Module 15 – Chromosomal abnormalities - Nondysjunction, Aneuploidy, Karyotyping (brief mention)

Assessment:

Two MCQ based tests will be conducted, first one after 9th module and second one after 15th module.

Eligibility for certification: Only participants who have completed the entire course and have at least 50% marks in both assessments will be eligible for certification.

For any queries – contact Office of the Schools and Centres – 0487 2207793, 0487 2207757 email id – shpps@kuhs.ac.in.

Registrar

