



Institute of Genetics and Hospital for Genetic Diseases

 **Begumpet, Hyderabad-500016**
Osmania University

PG DIPLOMA IN **GENETIC COUNSELLING**

INFORMATION BROCHURE

*Empowering Futures Through
Genetic Knowledge and Care*



ABOUT THE INSTITUTE

The Institute of Genetics & Hospital for Genetic Diseases, Osmania University, established in 1978, is a premier center for education, research, diagnosis and patient care in human genetics. The institute is dedicated to the prevention and management of genetic disorders through advanced chromosomal, biochemical, and molecular diagnostic services.

The institute also provides genetic counselling services for affected individuals and families and offers doctoral, postdoctoral, and specialized training programs in genetics and molecular diagnostics. With a strong focus on bridging scientific research and clinical practice, the institute aims to train skilled professionals and promote advancements in clinical genetics for improved healthcare outcomes.



OBJECTIVE

The goal of the course is to educate students in the core concepts of Human Genetics and Genetic Counselling, provide real time experiences, practical skills and mentoring to become competent, sensitive and motivated counselors to function in a wide range of settings and roles. The program strives to train students to interface between patients, clinicians and human geneticists, and become competent genetic counselors.



GENETIC COUNSELLING COURSE

Genetic Counselling (GC) is an advanced specialty of Human Genetics that provides information and advice to families affected with genetic disorders through increased understanding of genetic diseases, discussing disease management options, anticipating the risks and explaining the benefits of testing. Counselling the patients for the prevention/management of genetic disorders is highly essential for the fabrication of a healthy mankind.

The advent of genomics and its translation to clinical practice has increased the importance and demand for genetic counselors.



PROSPECTS OF THE COURSE

- Strong foundation in human genetics and genetic counselling on a theoretical, applied and translational basis.
- Insightful awareness of advances in medical genetics and related ethical, legal and social issues.
- Real time experience and proficiency in practical skills with patient-centered approach.
- Employment opportunities in hospitals, diagnostic centres, government health schemes, specialty clinics, academic & research institutions and private organizations.



Genetic Counselling



Molecular Diagnostics



Ultrasound



Cytogenetics



Cell Culture



COURSE DETAILS

The course is designed to reflect the growing impact of genomics in understanding human diseases. The duration of the course is one year and includes theory classes, practical training, and project work.



THEORY

The theoretical component provides a strong foundation in the principles of Human Genetics and Genetic Counselling, covering:

- Clinical Genetics
- Cytogenetics, Molecular Genetics & Biochemical Genetics
- Principles and Practice of Genetic Counselling



PRACTICAL TRAINING

The practical component offers comprehensive hands-on training in prenatal and postnatal diagnosis of genetic disorders, including:

- Clinical case studies and patient evaluation
- Pedigree construction and analysis
- Premarital, Prenatal, and Postnatal Genetic Counseling
- Carrier screening, risk assessment, and counseling challenges
- Psychological assessment and communication skills
- Prenatal diagnostic techniques and biochemical marker analysis
- 3D/4D ultrasonography applications
- Tissue culture and karyotyping
- Fluorescence In Situ Hybridization (FISH) and Microarray analysis
- DNA isolation and molecular diagnostic techniques
- PCR, ARMS-PCR, and Multiplex PCR
- Restriction Fragment Length Polymorphism (RFLP) analysis
- High-Performance Liquid Chromatography (HPLC)
- Next-Generation Sequencing (NGS)
- Enzyme-Linked Immunosorbent Assay (ELISA)
- Newborn screening techniques and interpretation



PROJECT WORK

Students will undertake project work in their areas of interest along with clinical observership and exposure in hospital settings.



ELIGIBILITY

M.Sc. in Life Sciences / BDS / MBBS / PG Diploma / MD/MS. in Medical Psychology from a recognized University.

No. of seats: 10



SELECTION CRITERIA

- Application will be screened and eligible candidates will be called to appear for an interview.
- Selection of candidates will be on the basis of academic record and performance in the interview.



FEE STRUCTURE

The fee for this self-financed course is Rs. 1,25,000/- (Rupees One Lakh Twenty Five Thousand only), payable through NEFT.

Application processing fee of Rs. 1000/- (Rupees One Thousand only), payable through NEFT.



IMPORTANT DATES

Applications open from	: 01-06-2026
Last date for submission	: 20-06-2026
Date of interview for shortlisted candidates	: 24-06-2026
Commencement of Course	: 01-07-2026

Applications along with prospectus can be downloaded from the following websites:

- www.osmania.ac.in
- www.instituteofgenetics.org



ADDRESS FOR CORRESPONDENCE

Prof. B. Vijaya Lakshmi
Director (I/c)
Institute of Genetics & Hospital
for Genetic Diseases, O.U.,
Begumpet, Hyderabad - 500016

Ph: 83319797339/340
Email: ighgd.hyd@gmail.com

Course Co-ordinators
Prof. A. Venkateshwari
 venkateshwari@yahoo.com
Dr. G. Deepika
Assistant Professor
 deepika2104@gmail.com



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Care