

## Eligibility

M.Sc. in Life Sciences / MBBS / M.Sc. in Biotechnology / M.Sc. in Medical Psychology from a recognized University.

**No. of seats: 10**

**(Reservation as per Central Government Rules)**

## Selection Criteria

Through a Common Entrance Test to be conducted by Directorate of Admissions, Osmania University, Hyderabad.

## Fee Structure

This is a DBT sponsored program, hence there is no fee for the course. However application processing fee of Rs. 1000/- (Rupees One Thousand only) payable at the time of submission of application through DD in favor of "The Director, Directorate of Admissions, Osmania University, Hyderabad"

## Studentship

Studentship of Rs. 10,000/- per month for 12 months will be awarded by DBT (Govt. of India).

## Evaluation

Theory & Practical	-	300 marks
Project Work	-	100 marks
Minimum pass marks	-	50%

Successful candidates will be awarded certificates by Department of Biotechnology (Govt. of India).

## Important Dates

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

[www.osmania.ac.in](http://www.osmania.ac.in)

[www.ouadmissions.com](http://www.ouadmissions.com)

[www.instituteofgenetics-ou.org](http://www.instituteofgenetics-ou.org)

Last date for submission of application : 13-11-2020

Last date for submission of application with late fee : 18-11-2020

Date of Examination : 23-11-2019

Date of interview for shortlisted candidates : 27-11-2020

Commencement of Course : 01-12-2020

## Address for Correspondence

**Dr. A. Venkateshwari**

**In charge Director & Course Coordinator**

**Institute of Genetics & Hospital for Genetic Diseases**

**Osmania University**

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**DBT SPONSORED**  
**One year Postgraduate Diploma**  
**Program in Medical**  
**Biotechnology on**  
**Genetic Counseling**  
**with Special Emphasis on Prenatal &**  
**Postnatal Diagnostics**

**Information Brochure**

**2020-2021**



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**for Genetic Diseases**  
**Osmania University,**  
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## About Osmania University

Osmania University, established in 1918, is the seventh oldest in India, the third oldest in South India and the first to be established in the erstwhile princely state of Hyderabad. The University has a vision of developing, enhancing, and improving the quality of human resources to meet the challenges of regional, national and global socio-economic changes. Its mission is to achieve excellence in teaching and research and to create opportunities for the students to contribute to the regional and national development. It is re-accredited by the National Assessment and Accreditation Council (NAAC) as 'A'+ Grade University.

## About the Institute

Institute of Genetics and Hospital for Genetic Diseases, established in 1978 by Osmania University is a premier institute in the country which conducts multi-disciplinary research in the field of Human Genetics.

Our aim is to prevent morbidity and mortality due to genetic disorders. We provide diagnostic services for these disorders at clinical, chromosomal, biochemical and molecular levels. Genetic Counseling is also offered to the affected individuals and their family members.

## Genetic Counseling Course

Genetic Counseling (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. Counseling the patients for the prevention/management of the debilitating genetic disorders is highly essential for the fabrication of a healthy mankind.

The importance and demand for GC has surfaced in present times, firstly due to the availability of genetic information owing to mapping of Human Genome project, and secondly due to the translation of this information for clinical use. By the virtue of above facts, our course has been designed to mould the students into well equipped and efficient genetic counselors ready to meet the challenges in clinical genomic medicine and provide a better service to mankind .

## Objective

**Department of Biotechnology** approved to conduct **One Year Postgraduate Diploma Program in Medical Biotechnology on Genetic Counseling with special emphasis on prenatal and postnatal diagnosis under Skill Development program.**

The goal of the course is to educate students in the **core concepts of Human Genetics, Genetic counseling**, provide real time experiences, practical skills and offer encouraging 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 potent genetic counselors.

## Course Details

The course is designed to reflect the increased impact of genomics in understanding human diseases

The course duration is of one year comprising of theory, practical training and project work.

### Theory includes

- Clinical Genetics
- Cytogenetic/Molecular/Biochemical Genetics
- Genetic Counseling

### Practicals includes

Hands on training in various techniques involved in Prenatal and Post natal diagnosis of Genetic Disorders:

- Clinical case studies
- Pedigree analysis
- Genetic Counseling
- Problems related to genetic counseling, Carrier testing, Risk estimate calculation
- Psychological assessment
- Methods of Prenatal Diagnosis Double Marker and Triple Marker
- 3D/4D Ultrasonography
- Tissue culture and Karyotyping
- Fluorescent In situ Hybridization (FISH)
- DNA isolation
- PCR, ARMS-PCR, Multiplex PCR
- Restriction Fragment Length Polymorphism
- High Performance Liquid Chromatography (HPLC)
- Single Stranded Conformational Polymorphism (SSCP)
- Enzyme Linked Immunosorbent Assay
- Newborn screening

### Project work: Desired discipline

## Prospects of the course

The course nurtures the students with a strong knowledge base in basic, applied and translational Human Genetics and core concepts of Genetic Counseling which is essential for a strong foundation and an effective holistic approach.

Students gain an insightful awareness of the new advances in medical genetics and of related ethical, legal and social issues. They gain real time experiences and profess in various practical skills.

This distinctive design affords students a strong knowledge base followed by diverse and robust patient-centered experience mandatory to function as formidable genetic counselors.

Students can have employment opportunities in various medical institutions, hospitals, national and state government health schemes, specialty clinics, diagnostic centers, academic institutions, research organizations and private organizations.