



AMITY UNIVERSITY

— UTTAR PRADESH —

Course Title: Basics of Cancer
Credit Units: 02
Course Code: BIOT 223

| L | P/S | SW/F W | TOTAL CREDIT UNITS |
|---|-----|-----------|--------------------------|
| 2 | | 0 | 02 |

Course Objectives: This course will provide a broad grounding in concepts, techniques and updates on recent advances in the field of cancer

Pre-requisites: Basic knowledge of Biology

Student Learning Outcomes: Student will be able to develop:

- Basic knowledge of cancer
- Molecular basis of cancer initiation and progression
- Cancer diagnosis, cancer prevention and treatment

| Module I: Characteristics and causes of Human Cancer | Weightage (%) |
|---|-----------------|
| Definition of cancer, classification of human cancers, Transformation and immortalization Role of chemical carcinogens, radiations and environmental carcinogens, role of virus in human carcinogenesis. | 30 |

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| Module II: Hallmarks of Cancer | |
| Proto-oncogenes, role of oncogenes and tumor suppressor genes in carcinogenesis. Role of apoptosis, Invasion and metastasis in cancer development | 35 |
| Module III: Cancer Diagnosis, Prevention and Therapeutics | |
| Conventional methods of cancer diagnosis, Cancer biomarkers-definition and classification, General principles of conventional cancer treatment-Radiotherapy, surgical and chemotherapy, Molecularly Targeted therapy | 35 |

Pedagogy for Course Delivery:

Lectures: 28 hrs

Class Test: 2

Total: 32 hrs

Assessment/ Examination Scheme:

| Theory L/T (%) | Lab/Practical/Studio (%) | End Term Examination |
|-----------------------|---------------------------------|-----------------------------|
| 100 | Nil | 70 |

Theory Assessment (L&T):

| Components (Drop down) | Class Test | Home Assignment | Attendance | External |
|-------------------------------|-------------------|------------------------|-------------------|-----------------|
| Weightage (%) | 15 | 10 | 5 | 70 |

Text Books and References:

- Cancer Biology by Raymond W. Ruddon (4th Edition). ISBN: 978-0195175448. Oxford University Press, 2007.
- The Biology of Cancer by Robert A. Weinberg (2nd Edition). ISBN: 978-0815342205. Garland Science 2013.

Other Study Material:

Research papers and review articles published in peer-reviewed scientific journals