

# Chapter 10: The Cell Cycle

## Section 10.1: Cell Cycle Overview

The cell cycle is the process by which a cell grows and divides to produce two daughter cells. It consists of several stages: interphase, mitosis, and cytokinesis.

Interphase is the longest phase of the cell cycle, during which the cell grows and prepares for division. It is divided into three stages: G<sub>1</sub>, S, and G<sub>2</sub>.

Mitosis is the process of dividing the nucleus and its contents into two daughter nuclei. It is divided into four stages: prophase, metaphase, anaphase, and telophase.

Cytokinesis is the process of dividing the cytoplasm and organelles into two daughter cells. It occurs at the end of mitosis.

The cell cycle is regulated by a complex system of proteins and hormones. These regulators ensure that the cell cycle proceeds in an orderly and controlled manner.

Checkpoints are points in the cell cycle where the cell is checked for errors. If an error is detected, the cell cycle is arrested, and the cell is given time to correct the error.

Cell cycle regulation is essential for the growth and development of an organism. It ensures that cells are produced in the correct numbers and at the correct times.

Understanding the cell cycle is important for understanding many diseases, including cancer. Cancer is a disease in which the cell cycle is regulated incorrectly, leading to the uncontrolled growth of cells.

Key terms: cell cycle, interphase, mitosis, cytokinesis, G<sub>1</sub>, S, G<sub>2</sub>, prophase, metaphase, anaphase, telophase, checkpoints, cancer.

1. The cell cycle is the process by which a cell grows and divides to produce two daughter cells.

2. Interphase is the longest phase of the cell cycle, during which the cell grows and prepares for division.

3. Mitosis is the process of dividing the nucleus and its contents into two daughter nuclei.

4. Cytokinesis is the process of dividing the cytoplasm and organelles into two daughter cells.

5. The cell cycle is regulated by a complex system of proteins and hormones.

6. Checkpoints are points in the cell cycle where the cell is checked for errors.

7. Cell cycle regulation is essential for the growth and development of an organism.

8. Understanding the cell cycle is important for understanding many diseases, including cancer.

9. Key terms: cell cycle, interphase, mitosis, cytokinesis, G<sub>1</sub>, S, G<sub>2</sub>, prophase, metaphase, anaphase, telophase, checkpoints, cancer.

10. The cell cycle is a continuous process that allows cells to grow and divide.

11. Interphase is the phase of the cell cycle where the cell is growing and preparing for division.

12. Mitosis is the phase of the cell cycle where the nucleus is dividing.

13. Cytokinesis is the phase of the cell cycle where the cytoplasm is dividing.

**THTR 213 History and Literature: Modern and Contemporary**

**Surveys Western theater from the late 19<sup>th</sup> century to the present. Examines styles and genres**

**of the period through the work of playwrights, directors, actors, designers, and theorists. Includes the study of cultural, social, political, and economic contexts of Western theatre in this period, as well as the changes in performance practice, the architecture of performance space, theatre technology, and audience composition.**

**Course Outcomes and Assessment (Expected Undergraduate Student Learning Outcomes – EUSLO):**

**Upon successful completion of the course, students will be able to:**

Apply the understanding of realism to an examination of non-realistic theatrical styles.

period

### EUSLO 1 and 2: Informed and Empowered Learners

**Rationale:** Assignments will help students identify non-realistic theatrical styles and analyze the

relationships between the growth of non-realistic theatrical styles and the emergence of realistic

**The United States and Europe between the wars (9 hours)**

Beginnings of Modern U.S. Theatre (3 hours): Glaspell (U.S.), "Trifles," "A Jury of Her Peers"; the Little Theatre Movement; the roles of women in U.S. society pre-suffrage; women in the early 20<sup>th</sup> century U.S. theatre

The rise of O'Neill (3 hours): O'Neill (U.S.): *The Hairy Ape*; American drama taken seriously; desire to keep up with Europe; cross-border (or -ocean) influences on U.S. writers

Pirandello, Artaud, and Fascism (3 hours): Pirandello (Italy): *Six Characters in Search of an Author*; "metatheater"; excerpts from Artaud (France), *The Theatre and Its Double*; the rise of fascism

**Europe 1939-1959 (9 hours)**

Death of a Salesman (3 hours): Miller (U.S.), *Death of a Salesman*; the American dream; the rise of the American musical

"Theatre for Pleasure or Theatre for Instruction"; pre-WWII Germany

Genet and existentialism (3 hours): Genet (France), *The Balcony*; the war and existentialism

Beckett and the absurd (3 hours): Beckett (Ireland), *Endgame*; Esslin, "Theatre of the Absurd"; absurdism and the apocalyptic landscape

**United States after World War II (9 hours + preparation of final project)**

Miller and the American dream (3 hours): Miller (U.S.), *Death of a Salesman*; "Tragedy and the American Dream"; *Golden Age*; the rise of the American musical

A final paper that will synthesize major themes in an examination of authors and plays, involving independent research, use of reliable sources, and application of original thought and analysis (1,750-2,000 words) (25%)

Review Theatre-By-the-Grove productions (10%)

Participation and attendance: exhibiting punctuality and reliability in terms of regular class

### **Attendance Policy**

The attendance policy will adhere to the university attendance policy found in the undergraduate catalog.

### **Required textbooks, supplemental books and readings**

**Course Analysis Questionnaire**

**A. Details of the Course**

A1. This course is required for majors in the BA in Theater Program. This course offering is being created as part of a strategic review of the Department's Curriculum. The current History of Theater requirements can be met without majors gaining a comprehensive

c. No laboratory supplies are necessary for this course.

Library holdings are adequate.

C3. No grant funds were necessary to provide the resources for this course.

C4. This course will be offered every four semesters.

C5. One section will be offered at a time.

C6. Up to 20 students can be accommodated in this class in which students do a considerable amount of writing.

C7. No professional society recommends enrollment limits or parameters for this course.

C8. This course does not involve the use of distance education.

#### D. Miscellaneous

No additional information is necessary.