Course Outline

585.751: Immunoengineering

This outline provides an overview of the course and assignments by week. Each module runs from **Wednesday to Tuesday night (11:59 pm EST)**, for a period of seven (7) days (1 week). Due dates for readings and other assignments may be referred to by the day of the module week in which they are due. For example, if a reading assignment is to be completed by Day 3 and the module started on Tuesday, then the reading assignment should be completed by Thursday.

Please remember to check the calendar for specific due dates.

| Module | Module Title | Assignments |
| --- | --- | --- |
| **Module 1** | Immunoengineering: A New Frontier | * Introductions * Module Discussion * Syllabus Review * Pre-test |
| **Module 2** | Immune Response: Pathogens | * Module Discussion * Module Assignment * Quiz * Project Selection |
| **Module 3** | Immune Response: Autoimmunity, Allergens | * Module Discussion * Module Assignment * Quiz * Project Background Research |
| **Module 4** | Immune Response: Cancer | * Module Discussion * Module Assignment * Quiz * Project: Draft of Significance |
| **Module 5** | Immune Response: Biomaterials | * Module Discussion * Module Assignment * Quiz * Project: Draft of Significance |
| **Module 6** | Midterm and Immune System Review | * Module Discussion * Midterm * Project: Previous Engineering Approaches |
| **Module 7** | Engineering Therapies: Pathogens | * Module Discussion * Module Assignment * Project: Previous Engineering Approaches |
| **Module 8** | Engineering Therapies: Autoimmunity, Allergens | * Module Discussion * Module Assignment   Project: Draft of Innovation |
| **Spring break** | | |
| **Module 9** | Engineering Therapies: Cancer | * Module Discussion * Module Assignment * Project: Experimental Approach Outline |
| **Module 10** | Engineering Therapies: Biomaterials and Implants | * Module Discussion * Module Assignment * Project: Identifying Supporting Data/Figures/Potential Pitfalls |
| **Module 11** | Engineering Tools: Immunoprofiling | * Module Discussion * Module Assignment * Project: Rough Draft |
| **Module 12** | Engineering Therapies: Tissue Engineering | * Module Discussion * Module Assignment |
| **Module 13** | Engineering Tools: Modeling | * Module Assignment * Project: Pitch presentation |
| **Module 14** | Final Presentations | * Project: Final Proposals |