Instructor and TA Contact Information & Office Hours
Prof. Wendy Hom wendy.hom@nyu.edu Thursday 10 AM – 12 PM, Room JAB874
Tanaya Purohit tap360@nyu.edu (please direct all questions to Prof. Hom via email)
*If you have a course conflict with these times, please email Prof. Hom to make an appointment.

Class Meeting Schedule:
Lecture: Wednesday, 3:00 – 5:50 PM, Room RH317
Lab: Tuesday, 12:00 – 3:00 PM, Room JAB873

Learning Objectives:
The goal of this lab is to give students practical experience with some of the techniques of molecular biology. These techniques form the foundation for the incredible revolution in our knowledge and understanding of cellular function that has taken place over the last three decades.

Required Textbook & Reading:
Molecular Biology of the Gene, 7th Edition. Watson, Baker, Bell, Gann, & Levine. (If you are using the 6th ed. is organized differently so read the correct chapters associated with the 7th ed.)
Lab exercises will be posted on NYUC at least a week before class.

Class Resources:
NYUC

Attendance & Participation Policy:
You are expected to attend and be on time for every lab and be adequately prepared by pre-reading the assigned laboratory exercises before coming to class. Two unexcused missed labs will result in an automatic failure of the course, entering the lab more than 15 minutes after the scheduled start time counts as a lateness, two lateness = 1 absence.

Absences may be excused for legitimate reasons and should be pre-approved when possible. Religious holidays are not observed at the NYU Tandon School of Engineering but are considered excused absences. Please check the schedule and let me know if you must miss class for a religious observance.

Exams
Midterm exam: Tuesday, October 10, starts at 12:00 PM, in-class
Final Exam: Tuesday, December 5, starts at 12:00 PM, in-class

Classroom Policies:
• Lab attire: a lab coat must be worn at all times while working in the lab. Shorts, short skirts, and open-toed shoes are not to be worn in the laboratory. No exceptions.
• Food and beverages are strictly forbidden from the laboratory.
• Lab exercises will be posted on NYUC and must be read before class.
• A lab notebook (bound, not spiral) must be brought to every lab session. A simple marble notebook is fine.
• No extra time for entering exams/quizzes late. No make-ups for quizzes and exams.
Code of Conduct:
All students at the NYU Tandon School of Engineering are expected to abide by the integrity guidelines set forth by the Student Guide of Academic Integrity (http://core.ls.nyu.edu/page/ls.academicintegrity). Academic dishonesty, including cheating on assignments/exams and plagiarism, will not be tolerated. Plagiarism is the word-for-word reproduction of another person’s work or ideas; paraphrasing without proper attribution also constitutes plagiarism. Neither will be tolerated in this class. Penalties for plagiarism range from a failing grade for a paper or a course to dismissal from the University. Such infringements will result in loss of credit on the exam/assignment, and your program coordinator will be notified.

Student with Disabilities:
If you have a disability and require special accommodation, please contact the Moses Center for Students with Disabilities at mosescsd@nyu.edu or 212-998-4980. Go to http://www.nyu.edu/life/safety-health-wellness/students-with-disabilities.html for additional information.
**Laboratory Schedule** (tentative):

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>9/5</td>
<td>Intro to Lab. Lab safety. Molecular lab techniques.</td>
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<tr>
<td>2</td>
<td>9/12</td>
<td>Separation of RNA and DNA by Gel Filtration Chromatography (204)</td>
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<td>3</td>
<td>9/19</td>
<td>Human DNA typing – VNTR, Alu, mtDNA (369)</td>
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<tr>
<td>4</td>
<td>9/26</td>
<td>Human DNA Typing cont. DNA/RNA Microarrays (235)</td>
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<td>5</td>
<td>10/3</td>
<td>Using Southern blotting to find a point mutation in the hemoglobin gene indicating Sickle Cell Anemia (315)</td>
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<td>Human DNA Typing lab report due</td>
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<tr>
<td>6</td>
<td>10/10</td>
<td>Using Southern blotting to find a point mutation in the hemoglobin gene indicating Sickle Cell Anemia (315) cont.</td>
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<td>Lab Midterm Hand in lab notebooks for mid-semester check</td>
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<tr>
<td>7</td>
<td>10/17</td>
<td>Mini-Prep Isolation of Plasmid DNA (202)</td>
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<tr>
<td>8</td>
<td>10/24</td>
<td>Restriction Enzyme Mapping (206) Bacterial Protein Fingerprinting (252) (plating) Sickle Cell Anemia (315) lab report due</td>
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<tr>
<td>9</td>
<td>10/31</td>
<td>Bacterial Protein Finger Printing (252)</td>
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<td>10</td>
<td>11/7</td>
<td>DNA Informatics (340) Sequencing the Human Genome (339)</td>
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<td>11</td>
<td>11/14</td>
<td>Blue/White Cloning of a DNA Fragment &amp; Assay of ß-galactosidase (300)</td>
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<td>12</td>
<td>11/21</td>
<td>Blue/White Cloning of a DNA Fragment &amp; Assay of ß-galactosidase (300) cont.</td>
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<tr>
<td>13</td>
<td>11/28</td>
<td>Transduction of an Antibiotic-Resistance Gene Blue White Cloning (300) lab report due</td>
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<tr>
<td>14</td>
<td>12/5</td>
<td>Transduction of an Antibiotic-Resistance Gene. (results) Lab Final Lab notebooks are due for grading</td>
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LAB REPORTS (Due Oct 3, Oct 17, Nov 28):
You are responsible for writing your own individual lab report. Plagiarism will not be tolerated. There is no minimum/maximum number of pages. Lab reports are due and must be electronically submitted through NYUC before midnight on the dates listed in the lab schedule. Late lab reports will be penalized 10 points for every day they are late. Lab reports must be typed, single-spaced, 12-pt Times New Roman font, and submitted in one of the following formats: .doc, .docx, or .pdf. See document “Writing a lab report” on NYUC for specific instructions on the requirements.

LAB NOTEBOOK
Will be graded throughout the semester. See document “Maintaining a Lab Notebook” on NYUC for specific guidelines.

TECHNIQUE POINTS
Will be awarded to each student at the end of each lab session by both the instructor and teaching assistant. Based on several factors including but not limited to: preparedness, lab technique, neatness, teamwork, organization and experimental results.

QUIZZES
Quizzes will be given at the beginning of lab and will cover the pre-lab reading.

EXAMS
Exam questions will be based on material discussed during lecture as well as from the assigned reading. Some questions (≤5%) may cover material from assigned reading that we did not discuss in class. All exams will be closed book and notes. If you miss the final exam and have carried a passing grade, you will receive a grade of an incomplete until the final is taken.
GRADING POLICY: 60% Lecture + 40% Lab grade

Lab grade breakdown:

- Midterm ........................................... 25%
- Final Exam ......................................... 25%
- Lab Reports ....................................... 15%
- Lab Quizzes ...................................... 15%
- Lab Notebook .................................... 10%
- Lab Technique ................................... 10%

There will be no curving of grades.

You are responsible for keeping up with the pre-lab readings, maintaining your lab notebook, submitting all lab reports, and performing the lab exercises. No extra credit or work will be offered.

*The penalty for plagiarism in this class is a failing grade.*