

Bio 439/517

Instructor: Rasul Chaudhry email: chaudhry@oakland .edu

Time/Day: M, W 5:30 PM -7:17 PM Lecture Room 318 HHS

Telephone: 248-370-3350

Recommended Texts:

GENES VIII by Lewin, B., 2004. Pearson/Prentice Hall

Molecular Biology of the Cell by Alberts et al., 4th Edition 2002. Garland Press

Molecular Biology by Weaver, 2002. McGraw-Hill Co.

SCHEDULE

DATE

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|--|-------|
| Introduction to Genes & Genomes (Chapter 1 & 2) | 08-30 |
| Home assignment – Cell Chemistry & Biosynthesis (Chapter 2 of MBC by Alberts) | |
| Gene Size and Clustering (Chapter 3 & 4) | 09-01 |
| Proteins – mRNA and Protein synthesis (Chapter 5 & 6) (Assignment due – 4-5 page summary) | 09-08 |
| “ | 09-13 |
| Home assignment – Protein localization (Chapter 8) | |
| Genetic code (Chapter 7) | 09-15 |
| Transcription - (Chapter 9) (Assignment due – 4-5 page summary) | 09-20 |
| Transcription (Chapter 10) | 09-22 |
| Regulation of transcription (Chapter 11) | 09-27 |
| Lambda phage – Transcription (Chapter 12) | 09-29 |
| First Test | 10-04 |
| DNA Replication (Chapter 13 & 14) Home assignment – Chromosomes & nucleosomes (Chapter 19 & 20) | 10-06 |
| DNA Replication Continue | 10-11 |
| DNA Repair and recombination (Chapter 15) | 10-13 |
| Transposable Elements (Chapter 16) (Assignment due – 4-5 page summary) | 10-18 |
| Retroposons (Chapter 17) Home assignment – Rearrangement of DNA (Chapter 18) | 10-20 |
| Promoters and enhancers (Chapter 21) (Assignment due – 4-5 page summary) | 10-25 |
| Transcription factors and activation of transcription (Chapter 22) | 10-27 |
| Second Test | 11-01 |

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| Processing of mRNA – (Chapter 24) | 11-03 |
| Home assignment – Controlling chromatin structure (Chapter 23) | |
| Ribozymes (Chapter 25) | 11-08 |
| (Assignment due – 4-5 page summary) | |
| Ribozymes ... continue | 11-10 |
| Cell Cycle (Chapter 29) | 11-15 |
| Cell Cycle ... continue | 11-17 |
| Oncogenes and Cancer (Chapter 30) | 11-22 |
| “ | 11-24 |
| Seminar summaries due | 11-29 |
| Third Test | 11-29 |
| Research Proposals due (BIO 517 only) | 11-29 |
| Seminars (Extended Class 5:30-8PM, as needed) | 11-29 |
| Seminars (Extended Class 5:30-8PM, as needed) | 12-01 |
| Seminars (Extended Class 5:30-8PM, as needed) | 12-06 |
| Seminar papers due | 12-06 |
| Seminars (Extended Class 5:30-8PM, as needed) | 12-08 |

| Grading Policy | 439 | 517 |
|-----------------------|------------|------------|
| First Exam | 20% | 20% |
| Second Exam | 25% | 25% |
| Assignment & Quizzes | 10% | 5% |
| Seminar | 10% | 5% |
| Seminar Paper | 5% | 5% |
| Grant Application | | 10% |
| Third Exam | 30% | 30% |

You are expected to devote 100% of your attention while in the class. No beepers, cell phones, etc.

It is expected from each student to study the assigned reading material before the lecture/lab class. Attendance is required. **Do not miss lectures. Students are responsible for the recommended text, assigned and lecture material.**

Oakland University approved academic conduct policy (2003-2004 Undergraduate Catalog, pp 51-77) and grading system will be used in this course. Grading system is based on your performance. A score of 93% earns a 4.0. Scores less than 50% will earn a 0.0. Grades between 1.0 and 4.0 will be initially based on a straight scale of percentages: (3.0=80%, 2.0=65%). Three exams will be conducted at the time and date as stated above. **No make up exams.**

It is students' responsibility to come prepared with the reading assignments/recommended text before each lecture. The additional material will only be available in the class. Copying and plagiarism from any source is not allowed.