



3. Gene regulation ±interplay among macromolecules and expression of phenotypes
4. Biomedical/disease-related aspects of topics
5. Critical reading of primary research literature
6. Understanding of principal methods and techniques

**Instructional Methods:**

The teaching methods employed in this course will consist of PowerPoint lectures (70%), groupwork (10%), and class discussions (20%). Primary research papers allow us to explore distinct topics more in depth through discussions and to translate science knowledge. Canvas (<https://canvas.alaska.edu/>)

C+	76-77
C	70-75
C-	68-69
D+	66-67
D	60-65
D-	58-59
F	0-57

**Course Policies**

**Attendance:** Regular attendance is expected to ensure consistency in discussions and presentations. Active student participation is essential and will be accounted for in the final grade. If you are unable to attend class, you should contact the instructor in advance.

**Exams:** Four exams will be given. Although exams are NOT cumulative, with the progression of the course a cumulative character is unavoidable. Makeup exams will only be allowed with pre-approval of the instructor or with an acceptable, documented reason such as unexpected illness, family emergencies, or other unavoidable events. The format of a make-up exam could vary from the original.

**Papers:** Students will receive adequate preparation time (1 week). **Emphas o.04 T721.99 Tm 0 G [()7(1**

*and, ordinarily, for the course in which the violation occurred. Moreover, violation of the Honor Code may result in suspension or expulsion.*

**Plagiarism Policy:**

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author. Intellectual property includes all electronic, spoken or print media ***thus any information taken of the web is included under this statement.*** Students are expected to cite all sources used in oral and written presentations. Cases of plagiarism will be taken seriously with a grade 0 for the particular assignment. Severe cases may be referred to the Department Chair or Dean or class failing considered.

**Computer Access:**

(Title IX). Faculty members are designated as responsible employees which means they are required to report sexual misconduct. Graduate teaching assistants do not share the same reporting obligations. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: <https://catalog.uaf.edu/academics-regulations/students-rights-responsibilities/>.

**Disability services statement:** I will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities.

**ASUAF advocacy statement** The ASUAF (Association of Student Union Activities Fund) is the student government of UAF, offers advocacy services to students who feel they are facing issues with staff, faculty, and/or other students specifically if these issues are hinderi ii i325.950000912 0 612 792 re W\*as ae

**Amending Syllabus**

The instructor may initiate changes to this syllabus subject to majority approval by students. Any and all changes will be clearly communicated (oral, email, blackboard). The instructor reserves the right to make minor change to the lecture schedule or calendar and any grading policies that are favor of the student.

**Special Dates pertinent to the course**

See academic calendar for details at: <https://catalog.uaf.edu/calendar/>

**Course Schedule**

<b>Date</b>	<b>Lecture</b>	<b>Topic</b>	<b>Text</b>
8-29	1	Introduction to Course	
8-31	2	Nucleotide Basics (Chemistry & Biosynthesis)	262-69, 294-96
9-2	3	Nucleotide Biosynthesis	888-903
<b>9-5</b>		<b>Labor Day-no class</b>	
9-7	4	Nucleotide Degradation & Associated Diseases	823-838
9-9	5	Deoxynucleotides & DNA Structure	829-838, 269-77
9-12	6	DNA lab techniques and DNA Topology	885-98
9-14	7	Chromosome Structure / <b>Group 1 activity</b>	898-910
<b>9-16</b>	<b>I</b>	<b>Paper Discussion I (Topoisomerases)</b>	
9-19	8	DNA Replication	915 - 30
<b>9-21</b>	<b>(1-7)</b>	<b>Exam I</b>	
9-23	9	DNA Replication (Telomeres)	915 ±30 & 993 ± 994
9-26	10	DNA Repair	930 -

10-21	18	RNA processing (capping, poly A) splicing, editing, siRNA	
10-24	19	Gene Expression (prokaryotes) / <b>Group 3 activity</b>	1055-75
10-26	20	Gene Expression (eukaryotes)	1075-94
	<b>IV</b>	<b>Paper Discussion IV (siRNA or editing)</b>	