WELCOME: This 3 credit hour course is designed to introduce you to structure, function and organization of DNA, DNA replication, transcription, and translation of RNA. Mechanisms of gene expression and regulation. The class meets for lecture once a week. All students will present a current paper from a scientific journal on one of the course topics according to the schedule.

ATTENDANCE: You are expected to attend all lectures according to the schedule—attendance will be monitored. Sign in with your full first name and last name as listed on the class roster. Users who do not provide their full names will mark as un-attendant. Stay focused: turn off your cellphone and pack it away, respectful behavior is expected. You will be expected to study all prior material available on-line (link is provided below under class web-page @ and on D2L) before attending. Missing an exam will be permitted only by prior arrangement and make-ups will only be allowed in the case of a University approved absence (illness with a doctor's note, a family crisis, or a religious holiday).

CLASS WEB-PAGE: https://martynova-vankley.com/courses/BIOL4352-M

Username ___________________ Password________________

MATERIALS: PowerPoint presentations for each lecture will be online along with the lecture videos, according to the provided schedule of the course; notes can be made and used during the exam. REMEMBER: draw it to know it! Textbook is optional for this course: Molecular Biology: Principles of Genome Function, by et al.

GRADING CRITERIA:

Exams (all together) - 50 pts
Oral presentation – 30 pts
Quizzes/independent activities – 10 pts
Participation in discussions after the presentations – 10 pts
Total – 100 pts
Bonus points – up to 2 points to the Final grade will be assigned to each student according to attendance, office hour visits, course evaluation completion.

COMUNICATION: over an e-mail avankley@sfasu.edu (please don't email through D2L). When emailing please indicate BOTH class & section # and your CID. When attaching a file, filename should be “First_LastName.ext”, it must also include your name in the document itself. Emails lacking any of the information listed above WILL BE IGNORED. No emails will be answered after 5 p.m. and/or during weekends. NO GRADE DISCUSSION over an e-mail, only by one on one meetings.

PERSONAL RESPONSIBILITY: As you know, according to the recent message from the Office of the President, we are encouraged to wear masks in public indoor settings.
PRESENTATION TOPICS & SOURCES: For each presentation student will assign a topic and a date from the schedule in the first day of class. Student must find the research paper - not a review - on the topic published within 5 years and clear it with the instructor during office hours no later than second week of class. All papers have to be in PDF file with your first and last name in the filename i.e. First_Last.pdf. They will be uploaded to our web page in time for everybody to be ready for the discussion after the presentation. Each student must meet individually at least two times with me to clear the content of their presentation.

PRESENTATION: Presentations should be in PowerPoint format and last no more than 10 minutes. Your talk should include visual aids to support your ideas and concepts. You have to turn in your presentation electronically 24 hours before the presentation and name it by your first and last name: First_Last.pptx. Detailed Presentation Evaluation Sheet:

<table>
<thead>
<tr>
<th>PRESENER:</th>
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<tbody>
<tr>
<td>PAPER TITLE:</td>
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<tr>
<th>TIME: BEGIN</th>
<th>FINISH</th>
<th>TOTAL</th>
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</table>

POSSIBLE SCORE

1. ORGANIZATION
Meeting the deadlines 5 pts; Submission format 3 pts; Consultations attendance 5 pts; 15 pts
Dress code 2 pts

2. PRESENTATION
Delivery style (reading vs. talking); Eye contact 5 pts; Voice quality 1 pts; Delivery rate 1 pt; Grammar 3 pts; Time (too long/ too short?) 5 pts 15 pts

3. VISUAL AIDS
Visibility/Readability 5 pts; Logical 5 pts; Referenced 2 pts; Design 3 pts 15 pts

4. RESEARCH
Statement of objective 5 pts; Plan & execution 10 pts; Conclusions 10 pts 25 pts

5. ORGANIZATION OF TALK
Introduction & Purpose 5 pts; Methodology explained 5 pts; 20 pts
Emphasis given to important results 5 pts; Discussion related to other work 5 pts

6. EXPERTISE
Knowledge of the literature 5 pts; Ability to answer questions 5 pts 10 pts

TOTAL
The maximum score would be 100 points. 100 pts

PARTICIPATION: Students are expected to take part in discussion after each presentation and will be assigned a grade for that.

EXAMS: there will be two noncumulative exams for the first and the second part of the course. Context will include any material covered during lectures and oral presentations.
**SCHEDULE** (tentative):

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 8/23-8/27</td>
<td>W: Class meeting</td>
<td>Introduction, Syllabus, DNA structure</td>
</tr>
<tr>
<td>2 8/30-9/3</td>
<td>In class: lec__, study @home__ (9hr/week)</td>
<td>DNA Replication</td>
</tr>
<tr>
<td>3 9/6-9/10</td>
<td>In class: lec, study @home</td>
<td>DNA Replication</td>
</tr>
<tr>
<td>4 9/13-9/17</td>
<td>In class: lec, study @home</td>
<td>DNA repair</td>
</tr>
<tr>
<td>5 9/20-9/24</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
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<tr>
<td>6 9/27-10/1</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
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<td>7 10/4-10/8</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
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<tr>
<td>8 10/11-10/15</td>
<td>W: EXAM 1 (D2L Brightspace)</td>
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<tr>
<td>9 10/18-10/22</td>
<td>In class: lec, study @home</td>
<td>Transcription</td>
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<tr>
<td>10 10/25-10/29</td>
<td>In class: lec, study @home</td>
<td>Translation</td>
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<tr>
<td>11 11/1-11/5</td>
<td>In class: lec, study @home</td>
<td>Translation</td>
</tr>
<tr>
<td>12 11/8-11/12</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
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<tr>
<td>13 11/15-11/19</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
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<td>14 11/22-11/26</td>
<td>Thanksgiving Break!!!</td>
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<tr>
<td>15 11/29-12/3</td>
<td>In class: Students presentations, study @home</td>
<td>1.<strong><strong><strong><strong><strong>, 2.</strong></strong></strong></strong></strong>, 3.<strong><strong><strong><strong><strong>, 4.</strong></strong></strong></strong></strong></td>
</tr>
<tr>
<td>16 12/6-12/10</td>
<td>W: Exam 2(D2L Brightspace) - December 8 at 4:00-6:00PM</td>
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</table>

**STUDENT LEARNING OUTCOMES:** Students who successfully complete Molecular Biology will:

1. Be able to describe qualitatively and quantitatively, both types of nucleic acids and the processes by which they are produced and maintained
2. Be able to describe, in detail, all steps involved in the production and delivery of proteins
3. Be able to describe the structure of pro- and eukaryotic genomes with relation to evolution of DNA

**PROGRAM LEARNING OUTCOMES:** Each of the student learning outcomes listed above address the Biology Department Program Learning Outcomes as follows:

#1: The student will demonstrate a good knowledge base in biological concepts and be able to integrate knowledge with critical thinking skills to become problem solvers. Knowledge base will include levels of complexity (molecular/cellular through population/communities/ecosystems); biological principles and processes.

#2: The student will be able to clearly communicate scientific information; provide clear structure and transitions; demonstrate scientific tone, language, and form.
#3: The student will be able to think scientifically; this includes critical thinking / reasoning and explaining biological principles as well as analyzing and interpreting quantitative data sets.

**ACADEMIC HONESTY**: Academic integrity (4.1) is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at [http://www.sfasu.edu/policies/student-academic-dishonesty-4.1.pdf](http://www.sfasu.edu/policies/student-academic-dishonesty-4.1.pdf)

**WITHHELD GRADES SEMESTER GRADES POLICY (5.5)**: Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**STUDENTS WITH DISABILITIES**: To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

**MENTAL HEALTH AND WELLNESS**: SFA values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**
SFA Counseling Services [www.sfasu.edu/counselingservices](http://www.sfasu.edu/counselingservices) Rusk Building, 3rd Floor 936.468.2401

SFA Human Services Counseling Clinic
[www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)

Human Services, Room 202 936.468.1041

**Crisis Resources:** Burke 24-hour crisis line: 1.800.392.8343
Suicide Prevention Lifeline: 1.800.273.TALK (8255) Crisis Text Line: Text HELLO to 741-741