BIOL 4010/6010
SUMMER 2023
06/07 - 07/25
TUESDAY AND THURSDAY

Instructor
Dr. Ansul Lokdarshi
Email: alokdarshi@valdosta.edu

MINI SYLLABUS

* MOLECULAR CLONING
* BACTERIAL CULTURE
* PCR
* DNA EXTRACTION
* RESTRICTION DIGESTION
* DNA GEL ELECTROPHORESIS
* PROTEIN EXPRESSION
* PROTEIN PURIFICATION
* CHROMATOGRAPHY
* PROTEIN QUANTIFICATION
* SDS-PAGE ELECTROPHORESIS
* IMMUNOBLOTTING
* DIY LABS

Laboratory Techniques in Biotechnology (June 7th - July 25th, 2023)
Summer Semester 2023
BIOL 4010 (CRN# 53461) BIOL 6010 (CRN# 53463) Special Topics in biology
Credit hours: 4

Instructor: Dr. Ansul Lokdarshi
Office: BC 2212
Email: alokdarshi@valdosta.edu

Office (Student) hours Monday 3:30 PM - 5:00 PM in my office, BC2212 or by appointment

Lecture (BS 1202)	Tuesday and Thursday	11:10 AM	1:10 PM
Lab (BS 2071)	Tuesday and Thursday	1:30 PM	5:20 PM

Pre-requisites: BIOL 1107, BIOL 1108 or permission from instructor

Course description:

- The lecture will focus on building, refreshing and advancing concepts for a variety of key lab techniques such electrophoresis, spectrophotometry, polymerase chain reaction, microbial aseptic techniques, bioinformatics, CRISPR etc., that are essential in biology related careers.
- Laboratory exercises will provide extensive hands-on experience with lecture related topics, in addition to strengthening the ideas of experimental design (developing hypotheses, setting up an appropriate experiment, statistics and evaluation of data).
- Although laboratory experience with practices such as sterile technique and pipet usage are ideal, these techniques will be part of the early-on laboratory instructions in the

This course learning outcomes support the achievement of the Department of Biology Educational Outcomes 1, 3 and 4 (http://catalog.valdosta.edu/pdf/2021-2022.pdf) DQG 968¶V as well as USG general education learning goals (https://www.usg.edu/academic_affairs_handbook/section2/C738).

Attendance:

- Attendance to both lecture and lab is required. If you miss a lecture or lab I reserve the right to determine what constitutes an excused or unexcused absence. To name a couple of examples of unexcused absences, schedul appointments or leaving town, except for University-related activities (e.g. you are on a sports team or are SUHVHQWLQJ DW D FRQIHUHQFH GR QRW FRQVWLWXWH H[FXVHG H[FXVHG DEVHQFH DQ\ DGGLWLRQDO ³QRW IHHOLQJ ZHOO´ DEVHQ
- Quizzes and in-class assignments will be given throughout the semester, which is why attendance is required. Generally, quizzes or in-class assignments in lecture cannot be made up if lecture is missed. If you miss the lecture and I approved your absence the total number of points possible to you will be reduced. If you miss quizzes and/or in-class lecture assignments and I did not approve the absence a zero will be given for that particular assignment, quiz, etc.
- Lectures and Labs cannot be made up, therefore, do not miss either. I also reserve the right to determine what constitutes an excused absence from lab. If you miss 2 labs (excused or unexcused) you will earn an F for the course as per University policy.
- If students must be absent due to quarantine or isolation requirement for COVID-19, they must report this situation via the COVID Self Reporting Link in MyVSU and through the Dean of Students Office to report any other absences as well.
- Mid-term and Attendance: Students will have several lecture and laboratory assignments to determine their overall grade by the Mid-Term and decide whether to withdraw at the deadline date (STUDENT IS RESPONSIBLE TO CHECK THE DEADLINE). As detailed above, attendance is mandatory.

Conduct: $UULYH RQ WLPH WR OHFWXUH DQG ODE 7XUQ RII FHOO SKR LI \RX GRQ¶W XQGHUVWDQG VRPHWKLQJ RU GLGQ¶W KHDU VRPHWK constitute an emergency) do not get up in the middle of lecture, leave and come back. Do not ask to get up and leave the room during an exam, unless it is an emergency. This course is offered ONLY face-to-face. Everyone is encouraged to wear mask during the lecture and labs.

Lab rules and regulations:

- Bring a notebook to lab to write down your data. You will need this to complete your weekly lab report and submit that file in BV for grading. A final lab report will be built on these weekly lab reports.
- Read the lab handouts ahead of time so that you have some idea of what will be going on in the lab.
- Be on time for lab. Instructions, clarifications and changes in protocols will be given at the beginning of lab, and I will not repeat myself just because you are late.
- No eating or drinking in the lab at any time. Some of the chemicals we will be using are toxic or mutagenic.
- Clean up after yourself. Remove all labels/tape from the glassware, rinse and place in the tub by the sink.
- If you break something or think you may have broken something SOHDVH WHOO PH $FFLGH SUREOHP LI \RX GR QRW WHOO PH EHFDXVH , ZRQ¶W EH DEOH WR function. If you have any TXHVWLRQV DERXW XVLQJ D SLHFH RI HTXLSPHQW LW¶V DOZD\V DW

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Student Opinion of Instruction survey (SOI): At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available on BANNER. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators. Instructors will be able to view only a summary of all responses after they have submitted final grades. While instructors will not be able to view individual responses or to access any of the data until after final grade submission, they will be able to see which students have or have not completed their SOIs. These compliance and non-compliance reports will not be available once instructors are able to access the results. Complete information about the SOIs, including how to access the survey and a timetable for this term is available at SOI Procedpr5wr3(tr)-10(i)5(l)5(a)-10(bd)Tibd nt Oama ons/s/s,6 0 1 8 0 757 rg0007(s,6 0 1 8 0

Tentative schedule: Please check BV for any changes that may occur during the semester.

WEEK	DAY	DATE	LECTURE	LAB