## BIOL 3000: Bistatistics (Spring 201)2

- 1. Course Information
  - Course number and section: BI3000(A)
  - Course nameBiostatistics
  - Hours of credit: 4
  - Pre-requisites or cerequisites as listed in university catalog((MATH 1113 Minimum Grade: C or MATH 1113 Minimum Grade: C or MATH 1113H Minimum Grade: C ) and (BIOL 1107K Minimum Grade: C or BIOL 2XM1 Minimum Grade: C and BIOL 2XML1 Minimum Grade: C ) and (BIOL 1108K Minimum Grade: C or BIOL 2XM2 Minimum Grade: C and BIOL 2XML2 Minimum Grade: C ) and MAT2/620 Minimum Grade: C
  - Classroom location and room numb BC2022(for the lecture,9:00 am- 9:50 am, MW), BC 3018(for the lab 10:00-11:50 am, MW)
  - Department, College, University: Department of Biology, College of Arts and Sciences, Valdosta State University
- 2. Instructor Information
  - Instructor name: Dr. Jonghoon Kang
  - Instructor contact: BQ217, 229333-7140, jkang@valdosta.edu
  - Instructor office hoursMW 12:45 pm t 1:45 pm
- 3. Course Description
  - An introduction to univariate and multivariate analysisdata. Laboratory work will allow students to collect data typical of the diverse disciplines in biology and subject those data to appropriate biometrical analyses, using a calculator or computer. Students will be required to keep a detailed lab notebook the statistical methods studied and also complete a term project and a scientific report. Twohour laboratory periods per week.
  - Required texts, resources, and materia Statistics in Plain English Tomothy C. Urda from Routledge Academi dedtion (2010) o
  - •

(<u>h</u>

\_)t

5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices. The will understand the basic concepts and principles underlying scientific methodology and be able to collect, analyze, and interpret data. They will learn a body of scientific knowledge and be able to judge the merits of arguments about scientific is **Shey** will be able

to perform basic algebraic manipulations and to use fundamental algebraic concepts to solve word problems and equations. They will be able to use basic knowledge of statistics to interpret and to analyze data. They will be able to evaluat

7. Schedule of Activities or Assignments, including universityeduled final exam times (schedule is tentative and may be subject to change)

Date	Class	Lab
1/7	Introduction	Visual presentation of elements: Graph
1/9	Ch 1	Amino acids: Moledar weight, ChargeAmino acid explorer
1/14	Ch 1 & 2	Proteins:Biological functions
1/16	Ch2	Proteins:number of amino acidsMean, Median, Mode, RNA pol II.
1/21	MLK day	No lab
1/23	Ch 3	Measures of VariabilityField trip (How many years did they rk@)
1/28	Ch4	Normal distribution.Protein stability: Statistical features
1/30	Ch 5	z ScoresProteins: Counts of amino acidescotein as a catalyst
2/4	Ch 5	z ScoresStatistical features of glycolysis: Distribution of free energy values
2/6	EXAM 1	Statistical features of TCA cycle
2/11	Ch 6	Standard errorsPhysical chemistry of biological redox reactions
2/13	Ch7	Statistical signifizance. Statistical feature of the electron transport chain
2/ <b>3</b> 8els	s100n07tisms:d	642ab267e7stn 1[()] TJ ET 394
2/20	Ch8	

## 8. Classroom Policies

• Attendance **a**d tardiness: Any absence policy should conform to the university policy. University Attendance Policy from the VSU catalogue: