

SYLLABUS – Marshall University

Course Title/Number: **PRINCIPLES OF GENETICS BSC 324**
Semester/Year: **Fall 2015**

Text: D. L. Hartl & M. Ruvolo. **Genetics: Analysis of Genes and Genomes, 8th Ed. (2012)**

Days/Time: **Lecture:** Tuesday & Thursday 12:30-1:45 pm.

Labs: Sect. 101: Monday 1-3:50 pm (TA: Emma Kist); Sect. 102: Tuesday 9 - 11:50 am (TA: Joe Hageman) Sect. 103: Wednesday 9-11:50 am (Dr. Fet)

Location: **Lecture: Science Building 374; Labs: Science Building 381**

INSTRUCTOR: Dr. **Victor FET** Office: **Science Building 206**, phone: (304) 696-3116;
email: fet@marshall.edu Office Hours: Mon, Wed 2:30-4:30, Thurs 2-4.

University Policies: By enrolling in this course, you agree to the *University Policies* listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802. *Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment.*

Course Description: The fundamental principles and mechanisms of inheritance. (*Pre-requisites:* BSC 120 and 121 with grade of C or better, or equivalent. CHM 355 recommended.) 4 credit hours.

Assessment & Grading: 4 tests @ 100 pts= 400 pts; 15 quizzes @ 10 pts=150 pts; 5 lab/homework reports @ 30 pts = 150 pts; total 700 pts. **SCALE (%)**: 90-100 A; 81-89 B; 71-80 C; 60-70 D; < 60 F

If you miss a quiz or a test you can make it up only if you have university excuse.

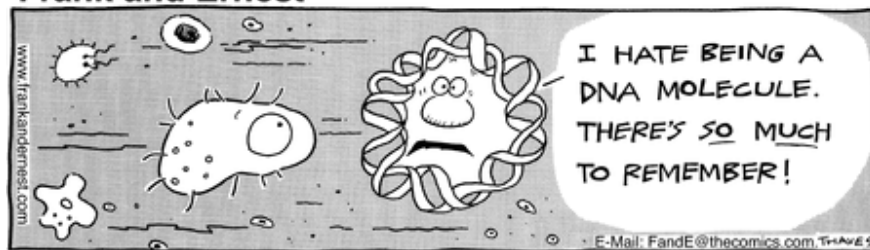
NO EXTRA CREDIT WILL BE GIVEN. Plagiarism Policy/Academic Honesty: *plagiarism or cheating* will not be tolerated, and will result in immediate dismissal (**F grade**).

Attendance is not mandatory, but you are **absolutely and solely responsible** for any material covered or announcements made in class. Please feel free to discuss with me any problems you might be having (**email preferred**).

Course Student Learning Outcomes	How students will practice each outcome in this Course	How student achievement of each outcome will be assessed in this Course
Students will be able to describe and explain: major chromosomal and gene-level mechanisms of heredity; major molecular mechanisms behind gene action; basic structure and function of informational molecules (DNA, protein); and to use and interpret these principles and mechanisms in solving major issues in classical genetics	In-lecture discussion, in-class exercises, problem practice, lab exercises	Graded assessments: in-class quizzes, exam questions, genetic problem solving, lab exercises

Lecture Schedule (Science 374)		Book Chapter (sections)
Aug 25, 27	Introduction; Mitosis & Meiosis	Ch. 4 (4.1-4.3)
Sept 1, 3, 8	Mendelian Genetics	Ch. 3 (3.1-3.5)
Sept 10, 15, 17	Modifications of Mendel	Ch. 3 (3.6)
Sept 22, 24	Sex Chromosomes	Ch. 4 (4.4)
Sept 29, Oct 1, 6	Karyotypes and Chromosome Abnormalities	Ch. 8
Oct 8	Linkage	Ch. 5 (5.1-5.2)
Oct 13, 15	DNA Structure	Ch. 1-2
Oct 20, 22	DNA Replication	Ch. 6 (6.1-6.6)
Oct 27, 29	Gene Expression 1	Ch. 10
Friday Oct 30 – last day to withdraw		
Nov 3, 5	Gene Expression 2	Ch. 10
Nov 10, 12	Mutation & DNA Repair	Ch. 14
Nov 17, 19	Recombinant DNA Technology	Ch. 2 (2.4), Ch. 6 (6.7)-6.6)
Thanksgiving Break		
Dec 1, 3	Molecular Evolution & Population Genetics	Ch 17 (part)
Lab & Test Schedule (Science 381):		
Aug 24-26	no labs	
Aug 31-Sept 2	Lab1: Meiosis	
Sept 7-9	no labs (Labor Day week)	
Sept 14-16	Lab2: Mendelian Genetics 1	
Sept 21-23	Test 1	
Sept 28-30	Lab3: Mendelian Genetics 2	
Oct 5-7	Lab4: Mendelian Extensions	
Oct 12-14	Lab5: Genetic Code	
Oct 19-21	Test 2	
Oct 26-28	Lab6: Proteins	
Nov 2-4	Lab7: DNA-1	
Nov 9-11	Lab8: DNA-2	
Nov 16-18	Test 3	
Final Test (multiple choice, comprehensive!): Tuesday, December 8, 12:45-2:45, Room 374		

Frank and Ernest



Copyright (c) 1986 by Thaves. Distributed from www.thecomics.com.