COLLEGE OF SCIENCES & ENGINEERING TECHNOLOGY

ENGINEERING TECHNOLOGY DEPARTMENT

COURSE SYLLABUS

ETEC 1371 – 01
Descriptive Geometry

3 credit hours (Lab): Spring 2018

LOCATION/TIME: **ITB 100**
Tuesdays & Thursdays 11:00am- 12:50pm

INSTRUCTOR: Bhavana Kashibhatla
E-mail: bxk023@shsu.edu

OFFICE: Room number- 325,
Pirkle Eng.Tech. Building

OFFICE HOURS: T & R 1:00pm – 2:00pm/ Email

TEXT: All chapters and resources are provided digitally through BlackBoard.

DRAWING PACKET: Purchased at Eagle Graphics

REQUIRED BASIC DRAFTING EQUIPMENT: **Campus Corner book store or* Bearkat Art Supply (Homegrown Marketplace)

- Triangular Engineers Scale
- Eraser
- 6" (or larger) 30/60 degree triangle triangle
- Compass (6")
- Sanding Block (to sharpen compass)
- Drafting Tape or Dots tools
- 180 Degree Protractor
- Triangular Architects Scale
- Eraser Shield
- 6" (or larger) 45 degree
- Dividers (6")
- Brush
- Bag or Case for your drafting

Select one of the following "pencil" options:

A - Mechanical Pencils with extra refill lead = 0.5mm + 0.7mm + 0.9mm
B - Pencils (2H, F, 6H)
C- Lead Holder(s) + Lead for holder (2H, F, 6H) + Lead Sharpener

Optional: Triangular Metric Scale, 5" or larger French Curve, Tracing Paper, or

Templates = Circle, Ellipse, etc….

Other REQUIRED Supplies:

- Personal electronic device for viewing online videos as needed
- Headphones for listening to online videos and/or music as you do lab work
- Notebook for your "Drawings Portfolio" and Reflections Final Assignment OR You may create a digital/electronic version of this, preferably as a Google Site

COURSE FORMAT:

All presentations, demonstration, and/or lectures will be delivered through BlackBoard. You will be expected to view these **BEFORE** class time. Class time will be reserved for lab or application only. This is what is called "flipped" or "blended" learning. You will need to take the "pre-quiz" BEFORE you come to class to provide proof that you have watched the lecture or demonstrations. Readings from various sources will be assigned, both in class and through announcements on BlackBoard. You are expected to keep up with all assignments. You are also expected to use the internet and other references to find additional information related to the subjects being discussed in class.

One of the primary purposes of this course is to develop an insight and working knowledge of correct and acceptable drafting standards in Descriptive Geometry, each student will be required to individually complete a series of drawing projects. Drawing projects will include manual drafting techniques as appropriate to the problem. Each problem will have a specific date for completion as shown on a separate assignment sheet handout. Drawing problems will be assigned through BlackBoard, you will be expected to have these drawing problems and bring in for practical application or lab time.

Potentially useful websites:

- Google eBook = Descriptive Geometry by William Watson: https://goo.gl/GpAmtv
- MIT Open Courseware = Geometric Disciplines and Architecture Skills: Reciprocal Methodologies: http://goo.gl/Rk1Cuz
- College of Engineering University of Wisconsin – Intro to Engineering Graphics by Kim Manner: http://goo.gl/jv3Ufc
- Hathi Trust Digital Library - The essentials of descriptive geometry, by F. G. Higbee = http://goo.gl/ezWbKQ

Others may be identified as we progress through the semester.

COURSE OBJECTIVES:

This course is designed to provide the basic fundamental principles and theories of descriptive geometry. At the conclusion of this course the student will have gained appropriate knowledge about and be able to correctly demonstrate appropriate examples of:

1. Spatial Relationships
2. Primary and Secondary Auxiliary Views
3. Revolutions
4. Patterning
4. Vector Analysis
5. Intersections
6. Developments
7. Graphical Data Analysis Procedure

COURSE SCHEDULE/OUTLINE:
***Bb =** work must be submitted to Blackboard by the Due Date for grading*
***Lab =** work must be completed and turned in during lab time for grading*

ALL work must be turned in for grading by the end of the unit on the date given for the unit. It will be considered late at the beginning of the next unit and it will **NOT** be accepted for grading after the second day of the next unit!

UNIT	CONTENT/ASSIGNMENTS	POINTS
Welcome & Course Intro.	1. Syllabus Quiz ***Bb**	100
	2. Student Biography Survey and Forum Post ***Bb**	50+50
	3. Basic Drafting Knowledge Quiz *(to see what you know; you get full credit no matter how low your score actually is on it)* ***Bb**	100
#1 = Drafting Review		
	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	100
	C. Drawing Problem(s) ***Lab**	200
	1.2- Measurement Scales	
	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	C. Drawing Problem(s) ***Lab**	200
	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	C. Drawing Problem(s) ***Lab**	200
	1.4- Orthographic Projection/Multi-views	
	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	C. Drawing Problem(s) ***Lab**	200

	A. Lecture Quiz (***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	C. Drawing Problem(s) ***Lab**	200
	Exam #1 *(50PTS questions **Bb** & 150PTS drawing practical in **Lab**)*	200
#2 = Descriptive Geometry Practice	A. Lecture Quiz Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	2.1 Point Projection Dwg Problem ***Lab**	100
	2.2 True Length Dwg Problems ***Lab**	100
	2.3 Slope and Bearing Dwg Problems ***Lab**	100
	2.4 Piercing Points Dwg Problem ***Lab**	100
	2.5 Slope of Planes Dwg Problem ***Lab**	100
	2.6 True Size Of Planes Dwg Problem ***Lab**	50
	2.7 Angular Distance Dwg Problem ***Lab**	100
	2.8 Distance Point To Line Dwg Problem ***Lab**	100
	2.9. Angle Between Planes Dwg Problem ***Lab**	100
	2.10 Skewed Lines Dwg Problem ***Lab**	100
	Exam #2 *(50PTS questions **Bb** & 150PTS drawing practical in **Lab**)*	200
#3 = Patterning	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	3.1 Parallel-Line Developments ***Lab**	75
	3.2 Radial-Line Development ***Lab**	75
	3.3 Triangulation ***Lab**	100
	Exam #3 *(50PTSquestions **Bb** & 150PTS drawing practical in **Lab**)*	200
#4 = Mapping	A. Lecture Quiz ***Lab**	50
	B. Terms Activity Mat ***Bb**	50
	4.1 Roadway Cut & Fill ***Lab**	100
	4.2 Earthen Dam ***Lab**	100
	4.3 Strike & Dips ***Lab**	100
Portfolio	Work on digital/electronic file	200
FINAL EXAM	Written Questions ***Bb**	100

NOTE: *The above Course Schedule/Outline can change based upon the classes progress as a whole group, bad weather, etc... Pay attention to announcements in lab and Check Bb periodically for changes. You will receive an announcement for any changes and they will be made here also.*

GRADE: Assignments and Exams are roughly equal in weight. Your grade will be based upon the following points break down.

A (90 to 100) = 4,550 to 4,000
B (80 to 89) = 3,999 to 3,550
C (74 to 79) = 3,549 to 3,275
D (66 to 73) = 3,274 to 3,000
F (0 to 65) = 2,999 to 0

COURSE EVALUATION:

This course consists of a series of on-line lectures, presentations, required readings from electronic media. Three (3) exams will be given over the lecture material. The other grades will come from quizzes, assignments, drawing problems, and your portfolio. It is the student's responsibility to check Blackboard and track their own grades. If they think the instructor has inputted incorrect scores you must let the instructor know about this within five (5) days of the grade being posted.

RECOMMENDED OR REQUIRED READINGS:

There has yet to be a single text adopted that covers the curriculum for this course. Digital textbook chapters, internet or reference materials, video lectures/instructions will all be shared electronically via Blackboard with updates made as needed. Students are expected to keep up with readings and will be held responsible for all assignment participation. Exam questions may also be drawn from the reading assignments.

ATTENDANCE POLICY:

1. Every student is expected to be present and ***on time*** for every class. Roll will take at the beginning of each class or lab session; if you are not signed in, you will be counted absent. In case you are absent, whether excused or unexcused, you are still responsible for the material covered.

NOTE: Class will end when you are done with the assignments and have turned them, or at 8:50pm whichever comes first.

Material and instructions will be disseminated on Bb only. It is your responsibility for obtaining handouts and information is incumbent on you.

2. Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. Each project is to be done on an individual basis. You should expect to spend **a minimum of three to four hours per week** in lab and 1-2 online outside of class. Drawings / Assignments turned in late will be penalized *ten points per day late*. Each regular calendar day after due date = day. ***Work will NOT be accepted for credit beyond one week of the due date.*** Absences do not exempt

you from the responsibility of turning material in on time and they do not extend the due date of the assignment schedule.

3. There will not be repeat exams, quizzes, or makeup assignments except for extenuating circumstances (Documented illness, family crisis, etc.) or by mutual agreement prior to the absences between the instructor and the student.

4. You will have the option to be exempt from taking the CADD Exam#2 if you have earned enough **POINTS** to receive an A or B. (Excused/documented absences will not count against you.)

ACADEMIC DISHONESTY:

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. For a complete listing of the university policy, see:

http://www.shsu.edu/administrative/faculty/sectionb.html#dishonesty

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept

strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:

http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf