

CRN 20814

Spring 2017

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## Course Syllabus for SUR 1101C Basic Survey Measurement

### Course Description: *From the Valencia Catalog:*

Prerequisite [MTB 2321](#) or [MAC 1114](#) or higher mathematics or departmental approval. Elementary surveying, including fundamentals of plane surveying; use and care of equipment. Covers accurate measuring of distance; theory and practice of leveling, angles and bearings; principles and use of transit; curves; stadia; and topographic and land surveying. Coordinated class, lab and field assignments. (Special Fee: \$). 3 credits/ 4 contact hours.

**Class Meetings:** Room 9-207, 9:00 – 12:00 AM, Friday morning, 15 weeks. HYBRID.  
Additional information available on BlackBoard (web)

**Text:** **Required:** *Introductory Surveying*, by J. Wirshing and R. Wirshing; Schaum's Outline -  
**Optional Text:** *Elementary Surveying, An Introduction to Geomatics*, C. Ghilani and P. Wolf – any edition.

**Materials:** Field Book, 2H-3H pencil, scientific calculator, protractor, engineering scale and 3-ring binder.

### Instructor Information:

**Name:** Sandra Bowling  
**Office:** Building 9, Room 223; Mailbox in 9-140F; Mail Code 4-41  
**Phone:** (407) 582-1302  
**Email:** [sbowling6@valenciacollege.edu](mailto:sbowling6@valenciacollege.edu)  
**Office Hours:** Specific hours posted on office door. Appointments may be made at mutually convenient times.  
**Virtual Hours:** Contact me via Blackboard/ Email

### Instructional

**Methods:** Knowledge of BlackBoard is necessary to be successful in this course; if you need assistance, please contact me. This course is a combined lecture and lab course; individual, as well as group work, is required.

### Student Performance Assessment:

#### Quizzes:

**Quizzes are to be completed prior to start of class.** The quizzes cover the reading and lecture material being presented in class. The material covered on the quizzes are taken directly from the Schaum's outline book and posted class notes.

#### Field Exercises and Field Book:

Field exercises will reinforce course topics during the semester; participation will be graded.

- **If absent for a Field Exercise, 15 points will be deducted from your Field Book/Exercise.**
- Required Field Exercise Procedure Report for each Field Exercise

**Traverse Project:**

Each field crew will be required to complete a Traverse Project. The project will require each group to complete the field work, traverse computations by longhand and Wolfpack. The calculated coordinates will be required to be plotted in autocad and bearings and distances will need to be shown. Additional calculations required: area of the project.

**Grading Evaluation:** Your final average will be valued according to the following grading scale:

| <b>Course Breakdown:</b>                                     | <b>Grading Scale:</b> |
|--|-----------------------|
| 20% - Weekly Quizzes and Homework and Blackboard Discussions | 90 - 100 % = A        |
| 10% - Field Book/ Lab Report                                 | 80 - 89.9 % = B       |
| 20% - Traverse Project                                       | 70 - 79.9 % = C       |
| 20% - Test 1   | 66 - 69.9 % = D       |
| 30% - Final  | 0 - 59.9 % = F        |
| 100% - Total   |                       |

**Course Learning Outcomes:**

This lecture/field exercise course is designed for Civil/Surveying Engineering Tech. and Drafting and Design Tech majors.

The major learning outcomes for this class include:

1. The students will learn the necessity for neatness, proper format, and legal requirements of note keeping for land surveying activities.
2. The students will learn to manipulate a steel tape and plumb bob to measure a distance of any length on any type terrain.
3. The students will be able to keep notes, operate the level, and perform rod and level activities on various land surveying and construction projects.
4. The students will be able to compute balanced azimuths or bearings from a horizontal angle, and a meridian.
5. The students will learn the proper use of the transit, develop correct procedures for its use and proper care.
6. The students will be able to measure and record the necessary angles and distance in the field to compute the distances, bearings and area of unoccupied points on the ground

**Field Exercise:**

1. Some activities involve expensive equipment and proper care of equipment is critical. Proper clothing attire required- no sandals are allowed in the field.

**Discussion Exercise on Blackboard:**

1. Two discussion activities on the practice of survey in the student's future career/major will be posted on the Blackboard. Topics will be decided upon in class.

**Class Room Policies, Absences and Make -up Work:**

**Special Rules:** Use of cell phones or laptops is not allowed once class has started. NO CELL PHONES OUT DURING A TEST. If cellphone is out during the test, you will have your test taken away and you will receive a zero on the test. Once a test is started, you will not be allowed to leave the room until the test is completed; else you will forfeit your test at that time.

**Disclaimer:** Changes in the syllabus and/or schedule may be made at any time by announcement from the instructor.

### **No-Show Procedure:**

Any student who does not attend class **prior to the start of the no-show reporting period for the part of term of this course** will be withdrawn by the instructor as a no-show. This will count as an attempt in the class, and students will be liable for tuition. If your plans have changed and you will not be attending this class, please withdraw yourself through your Atlas account during the drop period for this part of term.

### **Classroom Policies Attendance:**

Classroom attendance and punctuality is vital to academic success. If you miss a class, you need to contact a classmate to get the notes you missed. Students who do not maintain regular attendance will be withdrawn by the professor, unless other arrangements have been made with the professor. Missing the equivalent of more than 3 weeks of classes for any reason, other **than absences excused in accordance with Valencia's policies, is excessive and a basis for withdrawal. Being 15 minutes late for class or leaving prior to the end of class will count as an absence.** It is the responsibility of the student to find out what was covered if you miss class.

### **Withdrawal:**

Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of "W". A student is not permitted to withdraw after the withdrawal deadline. **See Important Dates below for the Withdrawal Deadline for your part of term** A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of "W". Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F". For a complete policy and procedure overview on Valencia Policy 6Hx28:4-07, please go to: <http://valenciacollege.edu/generalcounsel/policy/> .

### **Important Dates:**

**Spring Term:** Classes begin January 9. Drop/Refund Deadline 11:59 p.m January 17. No Show reporting period January 18-27. **Withdrawal deadline for W grade is 11:59 p.m. March 31.** See final exam schedule at <http://valenciacollege.edu/calendar/FinalExam.cfm> for exam date and time.

Credit Classes Do Not Meet: Jan 16, Feb 10 and March 13-19

### **Make-up Policy:**

Homework, and exams will be allowed in cases of documented student emergencies and will be graded with a lower percentage every week that passes and is overdue (-25% weekly). ***IF you miss the on-line Blackboard weekly quiz deadline you will not be allowed to make up the quizzes.*** For student emergencies, it is the student's responsibility to contact the instructor and provide documentation within one week unless special arrangements have been made previously.

| Date  | Topic  | Field Exercise and Assignments  | Chapter  |
|---|--|---|--|
| 1/13<br>Class 1                                   | Introduction, Units, Significant Figures, Field Notes and Errors   | <b>Review - Syllabus<br/>Homework #1 Due 1/20</b>   |  |
| 1/20<br>Class 2                                   | Distance Measurement   | Field Exercise 1: Organization and Taping Exercise #1   | Ch. 1, 2, 3<br>Schaum's Outline<br><b>Blackboard Quiz 1<br/>To be completed by 8:00 am on 1/20</b> |
| 1/27<br>Class 3                                   | Leveling – Theory, Methods and Equipment Leveling- Field Procedures and Computations<br><b>On Line Video to be Reviewed Prior to Class</b> | <b>Homework #2 Due 2/3<br/>Homework #3 Due 2/3</b>  | Ch. 4 & 5<br>Schaum's Outline<br><b>Blackboard Quiz 2<br/>To be completed by 8:00 am on 1/27</b>   |
| 2/3<br>Class 4                                    | Field Exercise 2: Ordinary Differential Leveling – Automatic Level   |   |  |
| Online Material to Be Reviewed                    | Profile Leveling<br><b>On Line PowerPoint to be Reviewed Prior to Class</b>  | Field Exercise 3: Profile Leveling<br><b>Homework #4 Due 2/17</b>   | Ch. 5<br>Schaum's Outline<br><b>Blackboard Quiz 3<br/>To be completed by 8:00 am on 2/10</b>       |
| 2/10  | Class does not meet  |   |  |
| 2/17<br>Class 5                                   | TEST 1   |   |  |
| 2/24<br>Class 6                                   | Total Station Instruments: Angle Measurements Angles, Azimuth & Bearings<br><b>On Line be Reviewed Prior to Class</b>                      | Total Station Handout(EDM)<br><b>Homework #5 Due 3/3</b>  | Ch. 6<br>Schaum's Outline<br><b>Blackboard Quiz 4<br/>To be completed by 8:00 am on 2/24</b>       |
| 3/3<br>Class 7                                    | Field Exercise 4: Horizontal Angles by Repetition- Close the Horizon   |   |  |
| 3/10<br>Class 8<br>Online Material to Be Reviewed | Traverse Computations & Area by Coordinates  | Longhand Computation Handout (Compass Rule) Calculate area by coordinates the area within the traverse<br><b>- Homework #6 due 3/24</b>                     | Ch. 7<br>Schaum's Outline<br><b>Blackboard Quiz 5 To be completed by 8:00 am on 3/10</b>           |
| 3/17  | Spring Break   |   |  |
| 3/24<br>Class 9                                   | Traversing   | Field Exercise 5: Begin Traverse Project Handout (Traverse Project)   | Ch. 7<br>Schaum's Outline  |
| 3/31<br>Class 10                                  | Traverse Computations<br><b>On Line Video</b>  | Field Exercise 5: Continue Traverse Project<br><b>Traverse Project Calculations<br/>Autocad Civil 3D Video<br/>Wolf Pack Video-<br/>Homework #7 Due 4/7</b> | Handout/Video  |
| 4/7<br>Class 11                                   | Traverse Computations  | <b>Traverse Project Calculations<br/>Autocad Civil 3D Wolf Pack</b>   | Handout/Video  |
| 4/14<br>Class 12                                  | The Public Lands   | Handout(Public Lands)<br><b>- Homework #8 Due 4/21</b>  | Handout<br><b>Blackboard Quiz 6<br/>To be completed by 8:00 am on 4/14</b>                         |
| 4/21<br>Class 13                                  | <b>FINAL TEST – IN – CLASS PORTION<br/>Traverse Project Due</b>  |   |  |
| 4/28<br>Class 14                                  | <b>FINAL TEST – FIELD PORTION</b>  |   |  |

## Student Core Competencies

The faculty of Valencia College have established four Core Competencies that describe the learning outcomes for a Valencia graduate. They are: THINK, VALUE, COMMUNICATE, ACT. These general competencies can be applied in many contexts and must be developed over a lifetime. They specify how learning can be expressed and assessed in practice. They enable students and faculty to set learning goals and assess learning within and across the many disciplines of human inquiry. Use the descriptions and examples of academic work for each to measure your own learning outcomes. Samples of the academic work are great additions to your Learning Portfolio. For further information on student core competencies please go to [www.valenciacollege.edu/competencies](http://www.valenciacollege.edu/competencies)

### Valencia College Core Competencies

*“The faculty of Valencia College has identified four core competencies that define the learning outcomes for a successful Valencia graduate. These competencies are at the heart of the Valencia experience and provide the context for learning and assessment at Valencia College. You will be given opportunities to develop and practice these competencies in this class. The four competencies are:*

THINK = Think clearly, critically, creatively; analyze, synthesize, integrate and evaluate in many domains of human inquiry.

- a) you will analyze data and scientific principles as they pertain to survey applications
- b) you will employ facts, formulas and procedures in lecture and in field exercise groups
- c) you will discover and understand how surveying is important in various fields and in disciplines other than in engineering and surveying.
- d) you will be able to draw well supported conclusions about the importance of survey in your daily life and in your career
- e) you will be able to revise conclusions in light of new observations and interpretations

VALUE = Make reasoned judgments and responsible commitments.

- a) you will be able to compare personal, ethical, and scientific values in the fields of geomatics.
- b) you will be able to see the value of the time commitment needed to succeed in geomatic fields.

COMMUNICATE = Communicate with different audiences using varied means.

- a) you will be able to practice written communication skills
- b) you will be able to verbally communicate to fellow students and teachers using professional, scientific language during lectures and labs

ACT = Act purposefully, effectively and responsibly.

- a) you will be able to manage your time and activities to achieve your academic goals
- b) you will meet deadlines
- c) you will apply the knowledge you learn to your career goals

## Expected Student Conduct

Valencia College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia's rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook.

**Students with disabilities** who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

## Disclaimer

*“The course outline and syllabus are subject to change as needed; changes will be announced in class by using ATLAS email or BlackBoard, etc. Your continued participation in this course after the drop-add deadline period constitutes an agreement with and an acceptance of the conditions presented in this syllabus.”*

## Attendance and Tardy Policy and Expectations

**During each lecture, a roster will be provided for you to sign;** if you are late to class, it is your responsibility to add your signature to the roster. Missing signatures are viewed as absences; leaving early from class, without professor approval, will be counted as an absence. More than one absence has proven, in the past, to be a sign that your grade will be substantially less than you may have hoped for and will result in the loss of field exercise points.

## ADDITIONAL CLASSROOM INFORMATION

### Security Statement

*We want to reassure you that our security officers are here around the clock to ensure the safety and security of the campus community. It's important to remain alert and aware of your surroundings, especially during the early morning or evening hours. Remember that you can always call security for an escort if you feel uncomfortable walking alone on campus. White security phones can also be found in many of our buildings; simply pick up the phone and security will answer.*

*Finally, report any suspicious persons to West Campus Security at 407-582-1000, 407-582-1030 (after-hours number) or by using the yellow emergency call boxes located on light poles in the parking lots and along walkways.*

### Faculty/Student Communication

*“Valencia College is committed to providing each student a quality educational experience. Faculty members have set high standards of instruction for themselves and for you. If you have a problem in a class, your first step is to talk to your instructor. If you are still dissatisfied, you may talk with the academic dean of the division for your class. We will work together to resolve any issues that arise.”*

- During non-classroom hours, you can talk to me one half hour before and after class or I can be reached by email at [sbowling6@valenciacollege.edu](mailto:sbowling6@valenciacollege.edu).
- I read my email every day and you will receive a response to your emails within 24-36 hours.

### Academic Honesty Statement

*“Each student is required to follow Valencia policy regarding academic honesty. All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression unless the assignment specifically states ‘group project.’”*

***Any student discovered to be cheating on an exam will receive an F for that exam.***

*No VC property may be removed from the lab.*

### Classroom Rules of Student Behavior

College policy prohibits children from attending lectures or labs; please, do not violate this policy.

**Proper classroom etiquette** is required for you to attend this class; please do not create distractions while the professor is lecturing. More than one warning for improper classroom behavior, following a referral to the academic dean or the calling of security, will be grounds to be dropped from the course without a refund.

### Additional Classroom Policies

**Beepers or cell phones** which emit audible tones should be **turned off or to vibrate** during periods when lectures are given in the lecture or the lab. Please, do not use your phone for text messaging during lectures; text messaging and phone calls can be completed outside the lecture room. The second time a student fails to comply with this policy will result in a referral to the academic dean; a warning after your meeting with the academic dean will be grounds to be dropped from the course without a refund.

Under no circumstances will your test scores, total points or final grades be discussed on the telephone. FERPA rights to privacy prevent the divulging of scores or related materials by that means. Scores will only be given face-to-face with each student or by accessing your Atlas account.

#### Baycare Behavioral Health's Student Assistance Program

*"Valencia is committed to making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help that may assist them with psychological issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. Students have 24 hour unlimited access to the **Baycare Behavioral Health's confidential student assistance program** phone counseling services by calling **(800) 878-5470**. Three free confidential face-to-face counseling sessions are also available to students."*

#### Students with Disabilities Information:

*"Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class; accommodations will not be applied retroactively. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities."*

*West Campus SSB, Rm. 102 Phone: 407-582-1523 Fax: 407-582-1326*

#### College Catalog/Student Handbook/Policy Manual

- A full description of all College policies can be found in the College Catalog at <http://www.valenciacollege.edu/catalog/>
- The Student Handbook can be found at: <http://valenciacollege.edu/studentdev/CampusInformationServices.cfm>
- The Policy Manual can be found at <http://www.valenciacollege.edu/generalcounsel/>
- The college calendar can be found at <http://valenciacollege.edu/calendar/> for important dates.

#### Support Services

- Valencia College offers a variety of SkillShops: short seminars covering a variety of topics which deal with student success, goals and purpose. To check out Valencia's Skillshop offerings, go to: <http://valenciacollege.edu/studentervices/skillshops.cfm>

Study tips:

*“LEARNING IS AN ACTION VERB!! Most students need to do more than just sit through lectures and reread their notes.*

***Spend 1-2 hour blocks of time EVERY DAY** actively writing or discussing concepts to make them a part of your memory.*

*Use the words you learn often, they will sink in better☺.*

*Here are some study and classroom management tips that have assisted former students:*

- *Attend class daily and don't be tardy. The introduction to each lecture explains the purpose of the entire lecture. Students who follow this rule won't miss important information.*
- *REWRITE YOUR NOTES soon after the lecture; if the instructor permits, tape record lectures and replay to refresh your memory when you rewrite your notes.*
- *Create flash cards with questions you make up from the lecture and lab with answers on the back.*
- *Use mnemonic devices and other games to remember concepts; go to Google images, YouTube and Khan Academy for additional pictures and videos to clarify concepts.*
- *Make lists of confusing topics from your studying and ask questions.*
- *Take advantage of the professor's office hours.*
- *JOIN A STUDY GROUP and predict what questions the professor could ask on the test. Get the telephone number of one or more buddies in case you are absent from a class.*