



# CHIPOLA COLLEGE

## COURSE SYLLABUS

Chipola's website: [www.chipola.edu](http://www.chipola.edu)

---

**COURSE TITLE:**

Introduction to Surveying

---

**COURSE NUMBER:**

SUR 1101

---

**COURSE DESCRIPTION (with prerequisites):**

This course covers the principles of measurements of distances, elevations, and angles. It also includes error theory in measurement and calculations, traverse calculations, and the basic principles of surveying and mapmaking. The use of various surveying equipment such as levels, EDM, transits, and GPS will be examined. Prerequisite: Eligibility for MAC 1105, College Algebra. 3 semester credit hours

---

**NAME(S) OF INSTRUCTORS:**

Olabode Ogedengbe, Workforce Development Building, Room 123, phone 718-2390, [McMahof@chipola.edu](mailto:McMahof@chipola.edu).

---

**EFFECTIVE ACADEMIC YEAR:**

2020-2021

---

**REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:**

*Surveying, 6<sup>th</sup> edition* by McCormac, Sarasua, and Davis published by Wiley. ISBN 978-0-470-49661-9

---

**GRADING POLICY:**

The standing of a student in each course is expressed by one of the following letters and corresponding grading system:

**A – 90 – 100**

**B – 80 – 89**

**C – 70 – 79**

**D – 60 – 69**

**F – 59 or less**

The Chipola Catalog provides policies and procedures regarding the grading system. A student's Grade Point Average is derived from the grading system/quality point scale.

---

**ATTENDANCE AND WITHDRAWAL POLICIES:**

Chipola College expects regular attendance of all students, and all instructors record attendance daily. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in the Instructor First Day Handout whether or not an absence is excusable and what affect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

#### **MAKE-UP POLICY:**

Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

#### **ACADEMIC HONOR CODE POLICY:**

Students are expected to uphold the Academic Honor Code. Chipola College's Honor Code is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

#### **STUDENTS WITH DISABILITIES POLICY:**

Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola's goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

#### **NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:**

Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college with regard to race, color, religion, ethnicity, national origin, age, veteran's status, disability, gender, genetic information, marital status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Wendy Phippen, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183C, 850-718-2269, pippenw@chipola.edu.

#### **LIBRARY AND ON-LINE REFERENCE MATERIALS:**

The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books and electronic databases can be accessed by using the *LINCCWeb* icon on the Chipola Library website at [www.chipola.edu/library](http://www.chipola.edu/library). If you have questions about database usage consult the "How to Use the Chipola Databases" on the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website. See your Instructor First Day Handout for individual instructor recommendations and resources.

### **TECHNOLOGY RESOURCES:**

The college's learning management system is **Canvas**. Classes become available on Canvas on the first day of the semester. It is the student's responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of eLearning. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues in accessing or utilizing Canvas. The **Technology Center**, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website.

### **FREE TUTORING RESOURCES:**

The Academic Center for Excellence (**ACE**) Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, Chipola College has contracted **Smarthinking**, a Pearson Company, for online tutoring services, accessible especially from 5 p.m. to 8 a.m. and weekends. Smarthinking can be accessed through Canvas.

### **ELECTRONIC DEVICE USAGE STATEMENT:**

Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

### **DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:**

**Program Learning Outcome:** Understand basic surveying principles, construction sites, and equipment.

#### **LINKING COURSE-LEVEL STUDENT LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES, ASSESSMENT METHODS, AND ARTIFACTS**

| <b>COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR SUR 1101</b> | <b>DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES</b> | <b>ASSESSMENT METHODS FOR COURSE LEVEL STUDENT LEARNING OUTCOMES</b> | <b>LEARNING ARTIFACTS FOR AA PROGRAM ASSESSMENT</b> |
|--|---|--|---|
|  |   |  |   |

|   |   |   |  |
|---|---|---|--|
| <p>At the completion of the course, the student will be able to:</p> <ul style="list-style-type: none"> <li>• Perform common surveying computations, including sideshots, inverting, intersection, and basic area partitioning problems.</li> <li>• Perform computations for horizontal and vertical route alignment curves, and set up the appropriate field notes for construction layout.</li> <li>• Determine areas of route cross-sections using mechanical and electronic planimeters.</li> <li>• Compute earthwork cut and fill volumes from route survey data.</li> <li>• Understand the field procedures related to setting marks for line and grade, setting grade stakes and slope stakes, new building and pipeline layout, and other surveying topics.</li> <li>• Perform a topo survey in a group; individually reduce and plot the field data, and draw a suitable topographic map.</li> <li>• Draw an accurate plat from a metes and bounds property description as well as layout the property precisely.</li> <li>• Understand the fundamental legal aspects and terminology related to property or boundary surveying.</li> <li>• Explain the principles of subdivision design and land use ordinances, as they relate to property surveying and site planning.</li> </ul> | <p>Demonstrate mastery of computer aided drafting (CAD) by constructing engineering, mechanical, and geometrical drawings.</p>  | <p>Assessment methods used are:</p> <p>Q, UT, SD, SP, Proj, F</p> |  |
|   | <p>Demonstrate ability to sketch, letter, and generate line-work to describe various objects.</p>   |   |  |
|   | <p>Demonstrate ability to read and produce drawings involving orthographic projection, sections, pictorial and auxiliary views.</p>   |   |  |
|   | <p>Demonstrate a wide range of mathematical skills including plane trigonometry, strength of materials, technical, and other engineering problems, including theories learned in engineering mechanics.</p> |   |  |
|   | <p>Demonstrate ability to use standard surveying equipment to make measurements and calculations to run a traverse, establish levels, keep notes and produce required drawings.</p>                         |   |  |
|   | <p>Demonstrate ability to analyze physical and mechanical properties of soil and concrete.</p>  |   |  |
|   | <p>Demonstrate ability to solve basic hydraulic problems using the theory of</p>  |   |  |

| <b>**Assessment Codes</b>                    |                                  |                                      |   |
|--|----------------------------------|--------------------------------------|---|
| <b>T</b> = Tests                             | <b>RPT</b> = Report/Presentation | <b>Proj.</b> = Projects              | <b>BO</b> = Behavioral Observation                        |
| <b>Pre/Post</b> = Pre- and Post-Tests        | <b>SP</b> = Skills Performance   | <b>Exp.</b> = Experiments            | <b>Clin.</b> = Clinicals                                  |
| <b>OT</b> = Objective Tests                  | <b>SD</b> = Skills Demonstration | <b>Cap. Proj.</b> = Capstone Project | <b>CS</b> = Case Study                                    |
| <b>UT</b> = Unit Tests                       | <b>W</b> = Writing Assignments   | <b>Cap. Course</b> = Capstone Course | <b>CP</b> = Case Plan                                     |
| <b>Q</b> = Quizzes                           | <b>E</b> = Essays                | <b>Prac.</b> = Practicum             | <b>Port.</b> = Portfolio                                  |
| <b>F</b> = Final Examination                 | <b>DE</b> = Documented Essays    | <b>Intern.</b> = Internship          | <b>Obs.</b> = Teacher Observation                         |
| <b>CF</b> = Cumulative Final                 | <b>RP</b> = Research papers      | <b>H</b> = Homework                  | <b>Sk. Check</b> = Skills Check-off Curriculum Frameworks |
| <b>EX</b> = Departmental Exam                | <b>J</b> = Jury                  | <b>PS</b> = Problem Solving          | <b>JP</b> = Judged Performance/Exhibition                 |
| <b>SE</b> = Nat'l or State Standardized Exam | <b>R</b> = Recital               | <b>DB</b> = Discussion Board         |   |

### **MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:**

Learning outcomes are determined by measuring the ability of each student to retain the learning objectives of the course. Performance-based methods, such as completion of assigned projects, general knowledge tests, oral and written presentations of assignments, group discussions, observation of mastery of critical skills and analysis of the final product will determine the final grade on this course.

### **ASSIGNMENT AND/OR COURSE OUTLINE**

#### **TENTATIVE SCHEDULE**

**Chapter 1, Chapter 24, and Appendix C**

**Chapter 2, 3, and 4**

**Chapter 5 and Field Work**

**Chapter 6, 7, 8, and Field Work**

**Chapter 9, 10, 11, and Field Work**

**Chapter 12 and Field Work**

**Chapter 13 and 14**

**Chapter 19 and 21**

**Chapter 22, 23, and 20**

**Chapter 15, 16, and Field Work**

**Chapter 17 and 18**

**ALL PROJECTS AND EXERCISES must be submitted by the last class meeting.**

**FINAL EXAM**

## **SUR 1101**

### **Introduction to Surveying**

**Equipment Provided:** Surveying equipment, computers with the Civil 3D software, and GPS equipment will be provided as needed. The student is responsible for paper, field books, and storage of computer information for transmittal to the instructor

**Session Agenda:** Class will start promptly at the times listed above. Each session will include lecture, discussion, and lab time. Off campus field classes may be set-up as well.

**Lab Time:** Check with your instructor for time and places where the software is installed and open for use.

**Suggestions for study:** Students should follow the schedule for assignments and due dates, read ahead on topics to be covered in class, ask questions to clarify the topics that are not completely clear to you, and work with your instructor during lab times.

**Attendance & Class Policies:** It is imperative that you attend every class session to receive the most benefit for this course. Attendance is required except for designated lab sessions as scheduled by the instructor. An absence may be excused with appropriate written evidence.

**No disruptions, disrespectful behavior, or violation of the student code will be tolerated.** Chipola College and your instructor are committed to maintaining standards of academic honesty and integrity is a shared responsibility. All are expected to know and comply with Chipola's Academic Honor Code which prohibits dishonesty in any form, including, but not limited to cheating, plagiarism, fabrication, and other forms of misconduct.

**No food or open drinks are permitted in the classroom. No cell phone or pager use is allowed in the classroom and should be turned off during lectures and presentations.**

**GRADING PROCEDURES:** - 50% - EXERCISES & TUTORIALS  
25% - PROJECTS  
10% - CLASS PARTICIPATION & ATTENDANCE  
15% - FINAL EXAM

|                   |          |
|-------------------|----------|
| A - EXCELLENT     | 90 – 100 |
| B - ABOVE AVERAGE | 80 – 89  |
| C - AVERAGE       | 70 – 79  |
| D - BELOW AVERAGE | 60 – 69  |
| F - FAILURE       | 0 – 59   |

Work is due two weeks after assignment or as per schedule. **Work that is late will lose points.** Grades are recorded in Canvas. Exercises/Drawings will be graded on a 20 point scale. Projects will be graded on a 25 point scale. Project 4501 will be graded on a 100 point scale. Numerical grade (0-100) will be recorded based on the results of the Project 3 survey.

The instructor reserves the right to modify this syllabus for the benefit of the class as he may evaluate. Any changes will be communicated to the class in advance

See your Instructor First Day Handout for individual instructor assignment schedule.