

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

DRFT

Course Number

2403

Course Title

Site Planning and Land Development

Catalog Description

This course involves the study of land development as it pertains to residential subdivision design using AutoCAD Civil 3D in the preparation of AutoCAD drawings. Most of this course will include the production of construction documents associated with lot layout, street design, utility placement, and drainage requirements. This course will emphasize student understanding in zoning and site development code requirements with emphasis of advanced use of AutoCAD Civil 3D design tools.

Prerequisites

DRFT 2183

Credit Hours

3 credit hours

Contact hours

45 contact hours

Load hours

3 load hours

Semesters Offered

Spring

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

Students will:

- Explain typical City zoning and development codes regulating land development.
- Demonstrate an understanding of digital survey data for grading, road design, and lot layout.
- Create individual lots with the parcel creation tool for plat preparation.
- Design road centerlines for corridor and intersection creation.
- Create road profiles and manipulate for vertical curve standards.
- Determine area calculations to design drainage pond and storm system volumes and layout.
- Produce master utility layout for sanitary, water, gas and electric.

General Education Outcomes Supported

None

Standard Practices

Topics list

- Research local city code to understand what site constraints may restrict certain development in different zoning.
- Review given survey data to find the best use and layout for design development of a residential subdivision.
- Using the parcel creation tool in Civil 3D, create residential subdivision lots
- Determine centerline of road to build a corridor from in with Civil 3D tools.
- Understand and learn to manipulate road profiles to adhere to vertical curve standards.
- Create a watershed area and calculate the volume of a detention pond and storm pipe layout.
- Design for all utility structures needed for a residential subdivision.

Learning activities

Assessments

- Technical drawing and modeling assignments
- Projects

Grading guidelines

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%