**DD-1601-0036**

21Y GEOSPATIAL ENGINEER (GEC)

**Course Number:** 491-403 (21Y10).

**Location:** The School of Geospatial-Intelligence, Fort Belvoir, VA.

**Length:** 18 weeks (656 hours).

**Exhibit Dates:** 10/09–Present.

**Learning Outcomes:** Upon completion of the course, the student will be able to perform basic Geospatial Information Systems (GIS) operations; interpret, analyze, and process remotely sensed imagery; manage essential elements of geospatial databases; compile essential elements of geospatial data into hard copy printable maps and overlays or special products; draw, scribe, digitize, and scan cultural, topographic or hydrographic features on overly or scribing surfaces or in digital formats; and utilize basic drafting techniques to tailor terrain products.

**Instruction:** Methods of instruction include audiovisual materials, case studies, classroom exercises, discussion, laboratory, learner presentations, lecture, and practical exercises. General course topics include GIS, remote sensing, physical geography and map reading.

**Related Competencies:** Remote sensing topics include elevation data, image enhancement, image rectification, and remote sensing platforms. Geospatial information systems topics include database operations (clip, dissolve, mask, union, buffers and join); datums, coordinates, and projections; digital data types; digitize and edit; GIS functions; overlays; and symbology. Physical geography topics include climate, maps, soils, and vegetation. Map reading topics include climate, maps, soils, and vegetation.

**Credit Recommendation:** In the lower-division baccalaureate/associate degree category, 3 semester hours in geospatial information systems, 2 in remote sensing, and 1 in physical geography or map reading (9/10)(9/10).