Engineering, 3E5X1

Instructor Supervisor: Mr. Dave Harrington
Course Manager: MSgt Scott R. Rector

Military Instructors Authorized: 21
Military Instructors Assigned: 17
Inbounds: 5
Outbound: 2
Engineering, 3E5X1

- Engineering Training at FLW
  - Engineering Apprentice Course
  - Construction Materials Testing
  - Engineering Design
  - Construction Surveying
  - Contract Construction Inspection (MTT)
Engineering, 3E5X1

- Engineering Apprentice Course
  - Interservice Training Review Organization (ITRO) 54 academic days
  - Air Force Unique Course- 17 academic days
  - TPR FY 2004- 247
  - Course Outline
J5AQA3E531-000, Interservice Training Organization (ITRO)
Consolidated – Drafting and Surveying 422.00 Hours TT

1. Produce Standard Instrument Drawings  (52.00 Hours)
2. Written/Performance Test and Critique  (4.00 Hours)
3. Produce a Mechanical Multi-view Drawing  (41.50 Hours)
4. Performance Test and Critique  (2.50 Hours)
5. Produce Architectural Drawings  (73.00 Hours)
6. Performance Test and Critique  (8.00 Hours)
7. Establish Horizontal Control  (35.00 Hours)
8. Written/Performance Test and Critique  (4.00 Hours)
9. Establish Vertical Control  (30.00 Hours)
10. Written Test and Critique  (2.00 Hours)
11. Establish Project Control with Automated Surveying  (40.00 Hours)
12. Performance Test and Critique  (4.00 Hours)
13. Perform Site Survey with Automated Surveying  (56.00 Hours)
14. Performance Test and Critique  (4.00 Hours)
15. Design and Layout Road with Automated Surveying  (40.00 Hours)
16. Performance Test and Critique  (8.00 Hours)
17. Layout a Building Site  (16.00 Hours)
18. Written Test and Critique  (2.00 Hours)

422.00 HOURS TOTAL
Engineering, 3E5X1

J3ABP3E531-001, Air Force Unique Course, 136 Hours TT

Block I – Engineering Apprentice Responsibilities 24.00 Hours TT
1. Introduction to AF Specific Training (1.00 Hour)
2. Global Positioning Surveying (GPS) (23.0 Hours)

Block II – GIS Applications 56.00 Hours TT
1. Drafting Principles (1.00 Hours)
2. Geographic Info System (GIS) Practical (49.50 Hours)
3. As Built Drawings (4.0 Hours)
4. Written Test and Critique (1.50 Hours)

Block III – Engineering Apprentice Responsibilities 56.00 Hours TT
1. C E Organization and Career Field Structure (16.00 Hours)
2. Standards of Conduct (1.00 Hours)
3. Base Comprehensive Planning (1.00 Hours)
4. Specific Contingency Responsibilities (29.00 Hours)
5. AFS Specific Publications (2.00 Hours)
6. End of Course Critique (1.50 Hours)
7. HAZCOM/Asbestos Hazards (3.50 Hours)
8. Written Test and Critique (1.50 Hours)
9. Graduation (0.50 Hours)
GIS Practical Course Objectives:

- Identify basic facts about GIS  STS: 16.10.1.1.
- Given a computer with ArcGIS, perform query, and convert legacy data  STS: 16.10.3.1., 16.10.3.2., 16.10.7., 16.10.8.
- Develop and maintain database in the proper formats.  STS: 16.10.3.3., 16.10.4., 16.10.5.
- Create and edit vector data  STS: 16.10.6.
- Identify basic facts about Geodesy.  STS: 16.10.1.2., 16.10.1.3., 16.10.1.4., 16.10.1.5.
- Given a computer with ArcGIS, create and present data.  STS: 16.10.7.
- Given a computer with ArcGIS and SDSFIE, convert metadata to SDSFIE format. STS: 16.10.2.
Recent Engineering Schoolhouse accomplishments
Recent Engineering Schoolhouse accomplishments

- Added 24 hours of GPS training to the Apprentice course
Recent Engineering Schoolhouse accomplishments

- Added 24 hours of GPS training to the Apprentice course
- Added 56 hours of GIS training to the Apprentice course
Recent Engineering Schoolhouse accomplishments

- Added 24 hours of GPS training to the Apprentice course
- Added 56 hours of GIS training to the Apprentice course
- Added 6 hours of DCP training to the Apprentice course
Engineering, 3E5X1

- Recent Engineering Schoolhouse accomplishments
  - Added 24 hours of GPS training to the Apprentice course
  - Added 56 hours of GIS training to the Apprentice course
  - Added 6 hours of DCP training to the Apprentice course
  - Developed Civil and CAD software license programs
Engineering Facility accomplishments

- Renovated Bldg 10301 to include 2 new classrooms, latrines and HVAC
Engineering Facility accomplishments

- Renovated Bldg 10301 to include 2 new classrooms, latrines and HVAC
- Renovated Bldg 10303 to include 3 new classrooms for GIS training, an instructor office, break room and new HVAC
Engineering, 3E5X1

Engineering Facility accomplishments

• Renovated Bldg 10301 to include 2 new classrooms, latrines and HVAC

• Renovated Bldg 10303 to include 3 new classrooms, an instructor office, break room and HVAC

• Renovated room in Bldg 10300 to be utilized as an SRC during apprentice level contingency exercises
Engineering Schoolhouse initiatives:

- Implement New GIS supplemental course, 5 academic days
- Incorporate Engineering Design and Materials courses into one 7-level course for EA career field
- Incorporate Field Identification for Soils in the Apprentice course
- Further develop our GIS, Civil and CAD software license programs
## TABLE II - TRAINING CONTENT

**COURSE CHART - J3AZP3E571 XXX**

Block I -- ADVANCED GEOGRAPHIC INFORMATION SYSTEM

<table>
<thead>
<tr>
<th>Course Topic</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Orientation</td>
<td>1.0</td>
</tr>
<tr>
<td>2. SDSFIE</td>
<td>3.0</td>
</tr>
<tr>
<td>3. Advanced ArcCatalog</td>
<td>4.0</td>
</tr>
<tr>
<td>4. GeoProcessing in ArcGIS</td>
<td>8.0</td>
</tr>
<tr>
<td>5. Advanced Layers</td>
<td>5.0</td>
</tr>
<tr>
<td>6. Managing Spatial Reference</td>
<td>2.0</td>
</tr>
<tr>
<td>7. Working with Data Frames &amp; Layout View</td>
<td>1.0</td>
</tr>
<tr>
<td>8. Working with Labels and Annotation</td>
<td>4.0</td>
</tr>
<tr>
<td>9. Database Schema</td>
<td>3.0</td>
</tr>
<tr>
<td>10. Advanced Editing</td>
<td>3.0</td>
</tr>
<tr>
<td>11. Spatial Analysis</td>
<td>2.0</td>
</tr>
<tr>
<td>12. Working with Rasters</td>
<td>1.0</td>
</tr>
<tr>
<td>13. Geometric Networks</td>
<td>1.0</td>
</tr>
<tr>
<td>14. End-Of–Course Critique</td>
<td>0.5</td>
</tr>
<tr>
<td>15. Written Test and Critique</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL HOURS:** 40 Hours

### SUMMARY OF CHANGES:

This is a new course requirement as a result of inputs from the 3E5X1 U&TW conducted at Fort Leonard Wood Mo from 10 to 14 May 2004.
Questions?