DEPARTMENT OF THE AIR FORCE
Headquarters United States Air Force
Washington, DC 20330-1030

CHANGE 2
CFETP RI9S100
1 October 2004

This change is effective as dated and will be implemented for enlisted initial skills training, Reporting Identifier (RI) 9S100 classes scheduled to start the course of initial entry (COIE), Electronic Principles, on or after 1 October 2004, and follow course Technical Applications Fundamentals classes commence on or after 1 January 2005.

Changes are as follows:

1. Remove CFETP Part II, "ATTACHMENT 2, ELECTRONIC PRINCIPLES JETS," pages 1-5 and replace in its entirety with "ATTACHMENT 2, ELECTRONIC PRINCIPLES JETS **CHANGE 2**," pages 1-5 contained herein.

2. Remove CFETP Part II, "ATTACHMENT 3, RI9S100 TECHNICAL APPLICATIONS FUNDAMENTALS JETS," page 7 and replace with "ATTACHMENT 3, RI9S100 TECHNICAL APPLICATIONS FUNDAMENTALS JETS **CHANGE 2**," page 7 contained herein

3. Write-in changes (pen & ink) for Part I, Section C:

Page	Paragraph	Action
17	10.1.2.	Change "Lackland AFB TX" to read "Keesler AFB MS"

4. Write-in changes (pen & ink) for Part II, Section D, Training Course Index:

Page	Paragraph	Action
25	11.	Change course "X3AZR9S100 026 Collection Management" to read "X3AZR9S100 028 Technical Applications Collection"
26	13.	Delete entire line "X3AZR9S100 028…AF" and write in **Area reserved for future use**

5. Write-in changes (pen & ink) for Part II, Section A:

Attachment	Page	Paragraph	Column	Action
5	2	5.2.	-	After term **PHENOMENOLOGY** add " - **APPLIED SYSTEMS** "

6. After necessary action, file this CHANGE 2 sheet in the back of CFETP.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

RONALD KEYS, Lt Gen, USAF
DCS/Air and Space Operations

1. Tasks, Knowledge and Technical References	2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training/Information Provided		
		A	B	C	D	E	A Comp. 3	B Comp. 5	C Comp. 7
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
2.1. ELECTRONICS SUPPORT SUBJECTS TR: TO 31-1-141-1; 00-25-234, AFR 700-13, AFR 80-23									
2.1.1. Safety							B		
2.1.2. First Aid							A		
2.1.3. Electrostatic Discharge (ESD) Control							B		
2.1.4. Electromagnetic Effects (EMP/EMI)							B		
2.1.5. Metric Notation TR: TO 31-1-141-2; 31-1-141-5									
2.1.5.1. Calculate Powers of Ten							2b		
2.1.5.2. Electrical Prefixes							B		
2.2. USE TEST EQUIPMENT TR: TO 31-1-141-1; 31-1-141-7, 31-1-141-8; 31-1-141-9, 31-1-141-10									
2.2.1. Analog Multimeter							2b		
2.2.2. Digital Multimeter							2b		
2.2.3. Oscilloscope							2b		
2.2.4. Signal Generator							2b		
2.3. BASIC CIRCUITS TR: TO 31-1-141-2; 31-1-141-9; 31-1-141-5									
2.3.1. Direct Current (DC)									
2.3.1.1. Theory							B		
2.3.1.2. Calculations							2b		
2.3.2. Alternating Current (AC)									
2.3.2.1. Theory							B		
2.3.2.2. Calculations							2b		
2.4. BASIC CIRCUIT COMPONENTS									
2.4.1. Resistors TR: TO 31-1-141-2; 31-1-141-15									
2.4.1.1. Theory							B		
2.4.1.2. Color Code							B		
2.4.1.3. Troubleshoot							2b		

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		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
2.4.2. Inductors TR: TO 31-1-141-2; 31-1-141-15									
2.4.2.1. Theory							B		
2.4.2.2. Troubleshoot							2b		
2.4.3. Capacitors TR: TO 31-1-141-2; 31-1-141-5, 31-1-141-15									
2.4.3.1. Theory							B		
2.4.3.2. Troubleshoot							2b		
2.4.4. Resistive-Capacitive-Inductive (RCL) Circuits Theory TR: TO 31-1-141-2; 31-1-141-5									
2.4.4.1. Basic							A		
2.4.4.2. Resonant							A		
2.4.4.3. Frequency Sensitive Filter							A		
2.5. ELECTROMAGNETIC DEVICES									
2.5.1. Transformers TR: TO 31-1-141-2; 31-1-141-5, 31-1-141-15									
2.5.1.1. Theory							B		
2.5.1.2. Troubleshoot							2b		
2.5.2. Relays and Solenoids TR: TO 31-1-141-2; 31-1-141-3									
2.5.2.1. Theory							B		
2.5.2.2. Troubleshoot Relays							2b		
2.5.3. Motor Theory TR: TO 31-1-141-2; 31-1-141-9									
2.5.3.1. Direct Current (DC)							A		
2.5.3.2. Alternating Current (AC)							A		
2.5.4. Generator Theory TR: TO 31-1-141-2; 31-1-141-9, 31-1-141-13									
2.5.4.1. Direct Current (DC)							A		
2.5.4.2. Alternating Current (AC)							A		
2.5.5. Synchro/Servo Theory TR: TO 31-1-141-2; 31-1-141-9							A		
2.5.6. Transducer Theory TR: TO 31-1-141-3; 31-1-141-13							B		

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		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
2.6. SOLID STATE DEVICES									
2.6.1. Diodes TR: TO 31-1-141-4; 31-1-141-15									
2.6.1.1. Theory							B		
2.6.1.2. Troubleshoot							2b		
2.6.2. Bipolar Junction Transistors TR: TO 31-1-141-4									
2.6.2.1. Theory							B		
2.6.2.2. Troubleshoot							2b		
2.6.3. Special Purpose Device Theory TR: TO 31-1-141-4									
2.6.3.1. Zener Diode							B		
2.6.3.2. Light Emitting Diode (LED)							A		
2.6.3.3. Liquid Crystal Display (LCD)							A		
2.6.3.4. Integrated Circuits (IC)							A		
2.6.3.5. Operational Amplifiers							A		
2.7. TRANSISTOR AMPLIFIER CIRCUITS TR: TO 31-1-141-1; 31-1-141-4									
2.7.1. Theory							B		
2.7.2. Stabilization							B		
2.7.3. Coupling							B		
2.8. POWER SUPPLY CIRCUITS TR: TO 31-1-141-3; 31-1-141-4, 31-1-141-9; 31-1-141-15									
2.8.1. Theory									
2.8.1.1. Rectifiers							B		
2.8.1.2. Filters							B		
2.8.1.3. Voltage Regulators							B		
2.8.2. Troubleshoot							2b		
2.9. WAVE GENERATING CIRCUITS THEORY TR: TO 31-1-141-3; 31-1-141-4, 31-1-141-10									
2.9.1. Oscillators							B		
2.9.2. Multivibrators							B		
2.9.3. Waveshaping Circuits							B		

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		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
2.10. DIGITAL NUMBERING SYSTEMS TR: TO 31-1-141-5									
2.10.1. Conversions									
2.10.1.1. Binary							B		
2.10.1.2. Hexadecimal							B		
2.10.1.3. Binary Coded Decimal							B		
2.10.2. Binary Math Operations							2b		
2.11. DIGITAL LOGIC CIRCUITS TR: TO 31-1-141-4; 31-1-141-9									
2.11.1. Theory									
2.11.1.1. Gates							B		
2.11.1.2. Flip-flops							B		
2.11.2. Digital to Analog (DA) and Analog to Digital (AD) Convertors Theory TR: TO 31-1-141-13							B		
2.12. BASIC COMPUTER FUNDAMENTALS/ NETWORK THEORY TR: TO 31-1-141-6C; 31-1-141-9									
2.12.1. Components							A		
2.12.2. Types							A		
2.12.3. Topologies							B		
2.12.4. Communication Mediums							B		
2.12.5. LAN Architecture							B		
2.13. BASIC COMMUNICATIONS THEORY									
2.13.1. Antenna TR: TO 31-1-141-12							B		
2.13.2. Transmission Lines TR: TO 31-1-141-7; 31-1-141-8, 31-1-141-9; 31-1-141-13							B		
2.13.3. Data Bus							B		
2.13.4. Waveguides TR: TO 31-1-141-9; 31-1-141-11							B		

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		A	B	C	D	E	A Comp. 3	B Comp. 5	C Comp. 7
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
2.13.5. Transmitters TR: TO 31-1-141-4; 31-1-141-9; 31-1-141-13									
2.13.5.1. Amplitude Modulation (AM)							B		
2.13.5.2. Frequency Modulation (FM)							B		
2.13.6. Receivers TR: TO 31-1-141-4; 31-1-141-9; 31-1-141-13									
2.13.6.1. Amplitude Modulation (AM)							B		
2.13.6.2. AM Receiver Signals									
2.13.6.2.1. Measure Radio Frequency (RF)							1a		
2.13.6.2.2. Measure Intermediate Frequency (IRF)							1a		
2.13.6.2.3. Measure Audio Frequency (AF)							1a		
2.13.6.2.4. Measure Local Oscillator (LO) Output							1a		
2.13.6.3. Frequency Modulation (FM)							B		

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		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	Course	Course	Course
3.14.1. Decision making and problem solving							B		
3.14.2. Troubleshooting techniques							B		
SUPPLEMENTAL ELECTRONIC PRINCIPLES									
3.15. Advanced RCL Circuit Theory TR: TOs 31-1-141-Series									
3.15.1. Basic							B		
3.15.2. Resonant							B		
3.15.3. Frequency Sensitive Filter							B		
3.16. Advanced Electromagnetic Devices TR: TO 31-1-141-series									
3.16.1. DC Generators							B		
3.16.2. AC Generators (single & multi-phase)							B		
3.16.3. DC Motors							B		
3.16.4. AC Motors (single & multi-phase)							B		
3.16.5. Synchro/Servo							B		
3.17. Advanced Special Purpose Devices (JFET, MOSFet, SCR, Tunnel Diode, etc.) TR: TO 31-1-141-4							B		
3.18. Troubleshooting Theory for Semiconductor Devices & Applications TR: TO 31-1-141;31-1-141-4							B		
3.19. Solder and Desolder TR: TO 00-25-234; 1-1A-14; 31-1-141-15									
3.19.1. Terminal connection							2b		
3.19.2. Printed Circuit Board							2b		
3.19.3. Multipin Connector							2b		
3.19.4. Coaxial Connector							2b		
3.20. Assemble Solderless Connectors TR: TO 1-1a-14; 31-1-141-15									
3.20.1. Crimped Connection							2b		
3.20.2. Coaxial Connector							2b		
3.20.3. Multipin Connector							2b		