



**Lesson 9 - Lecture 1: Market Review for Automation, Opportunities in Automation as a Career**

**Instructor: Mr. Whalen**

**Goals for this lecture**

For the student to gain an introductory understanding of the Control Systems & Components used in automation with a focus on Market Reviews for Automation and Opportunities in Automation as a Career.

**Automation Markets**

1. Where is automation used again?
  - A. The Big Four
    1. Home & Building
    2. Factory
    3. Process
    4. Transportation
  - B. Others
    1. Military

**Home & Building**

1. HVAC System
2. Lighting
3. Security
4. Appliance Control
5. Water & Sewer System
6. Entertainment

**In a Factory**

1. Assembly
2. Welding
3. Forming (metal or Plastic)
4. Testing
5. Tracking
6. Packaging
7. Storage & Retrieval
8. Shipping & Receiving



**In Extracting & Processing Raw Materials**

1. Mining
2. Drilling
3. Farming
4. Refining
5. Mixing
6. Filling
7. Heating & Cooling
8. Tracking
9. Transporting

**In the area of Transportation**

1. Collision Avoidance
2. Engine Control
3. Vehicle Positioning
4. Tilt Detection
5. Audio Controls
6. Speed Control
7. Traction Control, Pressure Feedback
8. Hands Free
9. Washers, Windows, Blinker, Lights
10. Mileage, Maintenance Feedback

**Automation Opportunities**

1. Engineering
2. Marketing
3. Sales
4. Operations & Production
5. Programming
6. Field Install & Maintenance
7. Information Technology
8. Communications
9. Management
10. Entrepreneur

**SUMMARY**

1. There are Four Main types of Commercial Non Military uses for Automation including Factory, Process, Home & Building, and Transportation.
2. There are other places automation is used like the Military and Space Exploration.
3. There are many processes that are now automated
4. There are many opportunities in Automation.
5. Automation is something that is here to stay