

**University of Arkansas - Fort Smith**  
**5210 Grand Avenue**  
**P. O. Box 3649**  
**Fort Smith, AR 72913-3649**  
**479-788-7000**

### **General Syllabus**

#### **WFL 2501 Set Up Reduction**

Credit Hours: 1

Lecture Hours: 1

Laboratory Hours: 0

Prerequisite: Consent of department head

Effective Catalog: 2018-2019

#### **I. Course Information**

##### **A. Catalog Description**

Provides the fundamentals of set-up time and waste reduction in order to maximize equipment availability. It covers the key concepts and application of the Single Minute Exchange of Die (SMED) system including the key elements of variation reduction, interchangeability, tool and equipment proximity, pre-set tooling and first piece quality checks.

##### **B. Additional Information - None**

#### **II. Student Learning Outcomes**

##### **A. Subject Matter**

Upon successful completion of this course, the student will be able to:

1. Validate the need for a SMED system
2. Define value of a SMED system
3. Define and differentiate between value-added and nonvalue-added activities
4. Identify requirements for a SMED system
5. Identify appropriate SMED activities
6. Implement the concept of group technology cells through the workplace
7. Validate standard performance objectives in setup reduction
8. Benchmark SMED with their firms set up activities

##### **B. University Learning Outcomes**

This course enhances student abilities in the following areas:

##### **Communication Skills (written and oral)**

Students will make oral presentations and prepare written assignments. Project work will occur in a “real world” setting requiring formal communication with the students’ employer.

### **Analytical Skills**

**Critical Thinking** - Students will use and apply various problem solving tools in the quality process including Pareto charts, histograms, process maps and other analytical quality tools.

**Quantitative Reasoning** -Students will use quantitative reasoning to solve a variety of statistical process control calculations.

## **III. Major Course Topics**

- A. What is SMED
- B. Effects of set up reduction
- C. Guidelines for set up reduction
- D. Understanding the toolkits used for set up reduction
- E. Planning and implementing a set up reduction program
- F. Identification of Waste
- G. Identification of internal and external times in set up reduction
- H. Developing the standard operating procedures for SMED
- I. Understanding the pitfalls and roadblocks associated a SMED program
- J. Developing a training program for SMED