GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: IT 117 DIVISION: 50 ALSO LISTED AS:

TERM EFFECTIVE: Spring 2014 **Inactive Course**

SHORT TITLE: STATISTICAL METHODS

LONG TITLE: Statistical Methods for Improving Performance

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours
2	18	Lecture:	2	36
		Lab:	0	0
		Other:	0	0
		Total:	2	36

COURSE DESCRIPTION:

An introductory course to improving performance in the work place. Students will learn to work as a team to apply statistical methods in business and industry. These methods include data collection, cause and effect analysis, frequency distributions, and the construction and interpretation of control charts. ADVISORY: Mathematics 205

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES
L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:
02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:
1. Work as a team to apply statistical methods to improving performance in industrial applications.
2. Prepare and interpret various charts such as flow diagrams, histograms, and frequency distributions.
3. Prepare and interpret control charts.

4. Collect data with random sampling.

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Inactive Course: 10/28/2013

1 2 Introduction

Assignments: Analyze and discuss industry studies on process improvement.

The students will:

- understand the goals and requirements of the course.
- relate course content with industry needs.

2-3 4 How to Improve Quality

Assignment: Unit A

The students will:

- discuss the meaning of quality
- discuss variation and identify special and common causes.
- construct process flow diagrams.
- apply their understanding to work situations.

4-5 4 Data Collection

Assignment: Unit B

The students will:

- collect data
- define and apply random sampling
- construct data collection sheets
- apply their understanding to work situations.

6-7 4 Charting

Assignment: Unit C

The students will:

- construct line and bar charts
- construct scatter diagrams
- apply their understanding to work situations

8 2 Pareto Charts

Assignment: Unit D

The students will:

- construct Pareto charts
- interpret Pareto charts
- apply their understanding to work situations

9 2 Cause and effect Analysis

Assignment: Unit E

The students will:

- use cause-and-effect analysis
- apply their understanding to work situations

10-11 4 Freuency Distributions

Assignment: Unit F

The students will:

- construct histograms
- calculate the mean and apply the standard deviation

- apply their understanding to work situations
12-14 6 Control Charts
Assignment: Unit G
The students will:
- construct and interpret control charts for measurable data
- determine process capability
- construct and interpret control charts for countable data
- apply their understanding to work situations
15 2 Control Charts for Individual Measurement
Assignment: Unit I
The students will:
- be introuced to X-MR charts
16 2 Applying Statistical Methods for Improving Performance
Assignment: Unit H
The students will:
- observe and report on applications in industry
- prepare summary of course project applications
17 2 Project Reports
Assignment: Prepare report
The students will:
- present team reports on course project
18 2 FINAL EXAM
Included in content.

METHODS OF INSTRUCTION:
Lecture/Discussion/Teamwork

REPRESENTATIVE TEXTBOOKS:
To be selected.

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Transferable CSU, effective 199670
UC TRANSFER:
Not Transferable

SUPPLEMENTAL DATA:
Basic Skills: N
Classification: I
Noncredit Category: Y
Cooperative Education:

Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department: IT
CSU Crosswalk Course Number: 117
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000456099
Sports/Physical Education Course: N
Taxonomy of Program: 095600