

## Course Outline

<b>Course Name:</b> Statistical Quality Control (SQC)		
<b>Course Code:</b> Stat 305	<b>Course Type:</b> Elective	<b>Course Credits: 3</b>
<b>Class Timings:</b> 9:00-9:50 a.m.	<b>Section: A</b>	<b>Student Meeting Hours/ Office Hours:</b> MW: 10.00 a.m.-11.00a.m. S-423
<b>Instructor Name: Dr. Itrat Batool Naqvi, Associate Professor,</b>		
<b>A Note from the Instructor:</b> <ul style="list-style-type: none"><li>• Lectures will be delivered in class face to face</li><li>• Lecture and reading Material will be uploaded on Moodle</li><li>• Quizzes will be performed during class time.</li><li>• Assignment documents will be uploaded on Moodle and their submissions will be considered as in hard copy during class timings</li><li>• For all assessments, dates will be announced in classes.</li></ul>		
<b>Instructor Contact Details</b> <i>Email:</i> itratnaqvi@fccollege.edu.pk <i>Office:</i> S-423 <i>Office Hours:</i> 10.00 a.m.-11.00a.m. <i>Guidelines for contacting instructor:</i> Students can contact me during office hours or make an appointment via email during weekdays and wait until I respond.		
<b>Course Description:</b> Pre-requisites if any: N/A Mode of Instruction: In-class Lecture [If applicable] Mode of peer-to-peer contact among students: online discussion forums		
<b>Technology Requirements:</b> <ul style="list-style-type: none"><li>• Students are required to have a computer/laptop/smartphone and calculator.</li><li>• During exams scientific calculator is mandatory and smartphones are not allowed.</li></ul> <i>Main Mode of Instruction:</i> In-class lectures, reading material, assignment documents will be uploaded on Moodle		

**Course Objectives:** This course has designed to provide students with an understanding of basic terminology and techniques relevant to Statistical Quality Control. Statistical quality control (SQC) involves statistical techniques to measure and analyze the variation in processes to monitor process quality and maintain it to attain targets. SQC is used to monitor the consistency of processes used to manufacture a product as designed.

**Learning Outcomes:** This course is intended to provide student with an understanding of terminology and techniques of Statistical Quality Control (SQC) and to develop students' ability to apply those concepts in practical situations. After the successful completion of this course the students would be able to translate data into meaningful relevant information specifically related to industrial domain areas e.g. economics and business.

### **Course contents:**

Introduction to quality, process control statistical quality control, and process capability analysis, Control charts for variables. Control charts for process average and process standard deviation. Control charts for attributes (p-chart, np-chart, c-chart, u-chart), Cumulative Sum (CUSUM) control charts. Acceptance sampling for attributes. Single sampling and double-sampling plans. Operating characteristic curves. Applications through the use of appropriate software

### **Textbook and Reference book, and Other Resources**

1. D.C.Montgomery. Introduction to Statistical Quality Control,6<sup>th</sup> Edition, John Wiley & Sons
2. G.N.Tagaraw. Statistical Quality Control.Publisher ZHTH

Related academic journals:

1. Journal of Quality Technology
2. Quality Engineering

### **Course Requirements:**

**Class Participation:** Class attendance; participation in-class activities and discussions

**Assignment 1-3**

**Quiz 1-3**

**Assigned Readings**

Practice Worksheets/ questions and reading documents

### **Grading Legend**

Below is the grading legend of FCCU (published in all catalogues and available on the FCCU website) as approved by the Academic Council

<b>Grades</b>	<b>Quality Points</b>	<b>Numerical Value</b>	<b>Meaning</b>
A	4.00	93-100	Superior
A-	3.70	90-92	
B+	3.30	87-89	Good
B	3.00	83-86	
B-	2.70	80-82	
C+	2.30	77-79	Satisfactory
C	2.00	73-76	
C-	1.70	70-72	
D+	1.30	67-69	Passing
D	1.00	60-66	
F	0.00	59 or below	Failing
NS	0.00	0.00	Did not show up in class
W	-	-	Officially Withdrawn
AW	-	-	Administrative Withdrawal/Dismissal
AU	-	-	Audit/Listener Status
I	-	-	Incomplete
T	-	-	Transferred credit

The entire course is worth 100%, the breakup is as follows (for example):

<b>Class Participation</b>	5%
<b>Assignments:</b>	10%
<b>Quizzes:</b>	10%
<b>Midterm exam:</b>	25%
<b>Final term exam:</b>	40%
<b>Final Project</b>	10%
<b>TOTAL</b>	<b>100%</b>

#### **Missed Assignments/Make-Ups/Extra Credit**

- *NO delayed assignments. There will be 50% deduction of marks for late submission after due date.*
- *NO Make-up mid/final exam*
- *NO retake mid/final exam*

#### **Attendance Policy:**

If a student does not attend a minimum of 70% of total classes, he/she will not be permitted to take the final examination in the course.

#### **Classroom Participation:**

Students must participate in the classroom for class activities and may ask questions related to the lesson taught. Class participation is also included in your grade

#### **Changes to the Syllabus:**

This syllabus was designed to convey course information and requirements as accurately as possible. It is important to note however that it **may** be subject to change during the course depending on the needs of the class and other situational factors. Such changes would be for your benefit and you will be notified of them as soon as possible.

#### **Student Support Services**

- Students can contact the [Campus Counseling Center](#) at 0331-444-1518 or [ccc@fccollege.edu.pk](mailto:ccc@fccollege.edu.pk).
- [Writing Center](#)
- [Mercy Health Center](#)

#### **Other Useful Links:**

- [Sexual Harassment Policy](#)
- [Anti-Corruption Policy](#)
- [Academic integrity](#)
- [Plagiarism Policy](#)
- [Academic Calendar](#)

*I expect that you will strictly follow the core values of FCCU and put your entire efforts to learn as per the course requirements, attend classes, read the textbook(s)/other assigned reading material and do the assignments in the stipulated time period*