Sample Syllabi

The following sample syllabi for courses using *Statistics for Engineers and Scientists* by William Navidi are included:

One Semester Course Syllabi:

- 1) One Semester Syllabus (Basic)
- 2) One Semester Course Syllabus (For those who wish to include propagation of error)
- 3) One Semester Course Syllabus (For those who wish to include simulation)
- 4) One Semester Course Syllabus (For those who wish to include propagation of error and simulation)
- 5) One Semester Course Syllabus: (For those who wish to emphasize factorial experiments and quality control)
- 6) One Semester Course Syllabus: (For those who want to put emphasis on regression and statistical Quality control charts)
- 7) One Semester Course Syllabus: (For those who want to put emphasis on regression and factorial experiments)

Two Semester Course Syllabi:

- 8) Two Semester Course Syllabus: (Basic)
- 9) Two Semester Course Syllabus: (For those who want to emphasize simulation and computation using software)
- 10) Two Semester Course Syllabus: (For those who want to emphasize probability theory in the first semester)

These are only a few of the many possible course outlines that can be devised and are to be taken only as very rough guidelines. Many instructors may wish to develop courses that differ from all the ones listed. Instructors may wish to proceed faster through some parts of the material and more slowly through other parts, depending on their personal preferences and on the needs of their students. Likewise, some instructors may find that they can cover more material than is suggested, while others may cover less. For these reasons the syllabi presented are inconsistent in the amounts of time they allocate to the various chapters. Instructors may also wish to modify the schedules to include time for review and for exams.

STATISTICS FOR ENGINEERS AND SCIENTISTS by William Navidi	Sample S
One Semester Syllabus (Basic)	
Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 1.1 Sampling 1.2 Summary Statistics 1.3 Graphical Summaries	Week 1
Chapter 2: Probability Sections 2.1, 2.3-2.5 2.1 Basic Ideas 2.3 Conditional Probability and Independence 2.4 Random Variables 2.5 Linear Functions of Random Variables	Week 2 - Week 4
Chapter 3: Propagation of Error Section 3.1 3.1 Measurement Error	Week 4
 Chapter 4: Commonly Used Distributions Sections 4.1-4.3, 4.5, 4.9, 4.10 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.5 The Normal Distribution 4.9 Probability Plots 4.10 The Central Limit Theorem 	Week 5 - Week 7
 Chapter 5: Confidence Intervals Sections 5.1-5.7 5.1 Large-Sample Confidence Intervals for a Population 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Population 5.4 Confidence Intervals for the Difference Between Tw 5.5 Confidence Intervals for the Difference Between Tw 5.6 Small-Sample Confidence Intervals for the Difference 5.7 Confidence Intervals with Paired Data 	Week 8 - Week 9 n Mean n Mean wo Means wo Proportions nce Between Two Means

Chapter 6: Hypothesis Testing Sections 6.1-6.8 Week 10 - Week 12 6.1 Large-Sample Tests for a Population Mean 6.2 Drawing Conclusions From the Results of Hypothesis Tests 6.3 Tests for a Population Proportion 6.4 Small-Sample Tests for a Population Mean 6.5 Large-Sample Tests for the Difference Between Two Means 6.6 Tests for the Difference Between Two Proportions 6.7 Small-Sample Tests for the Difference Between Two Means 6.8 Tests With Paired Data Chapter 7: Correlation and Simple Linear Regression Sections 7.1-7.4 Week 12 - Week 14

7.1 Correlation

7.2 The Least-Squares Line

7.3 Uncertainties in the Least-Squares Coefficients

7.4 Checking Assumptions and Transforming Data

Sample Syllabus 2

STATISTICS FOR ENGINEERS AND SCIENTISTS by William Navidi

One Semester Course Syllabus (for those who wish to include propagation of error)

Chapter 1: Sampling and Descriptive Statistics	
Sections 1.1-1.3	Week 1
1.1 Sampling	
1.2 Summary Statistics	
1.3 Graphical Summaries	
Chapter 2: Probability	
Sections 2.1-2.5	Week 2 - Week 4
2.1 Basic Ideas	
2.2 Counting Methods (Optional)	
2.3 Conditional Probability and Independence	
2.4 Random Variables	
2.5 Linear Functions of Random Variables	
Chapter 3: Propagation of Error	
Sections 3.1-3.4	Week 4 - Week 6
3.1 Measurement Error	
3.2 Linear Combinations of Measurements	
3.3 Uncertainties for Functions of One Measurement	
3.4 Uncertainties for Functions of Several Measurements	
Chapter 4: Commonly Used Distributions	
Sections 4.1-4.3, 4.5, 4.10	Week 7 - Week 9
4.1 The Bernoulli Distribution	
4.2 The Binomial Distribution	
4.3 The Poisson Distribution	
4.5 The Normal Distribution	
4.10 The Central Limit Theorem	
Chapter 5: Confidence Intervals	
Sections 5.1-5.7	Week 9 - Week 11
5.1 Large-Sample Confidence Intervals for a Population M	ean
5.2 Confidence Intervals for Proportions	
5.3 Small-Sample Confidence Intervals for a Population M	ean
5.4 Confidence Intervals for the Difference Between Two N	Means
5.5 Confidence Intervals for the Difference Between Two I	Proportions
5.6 Small-Sample Confidence Intervals for the Difference I	Between Two Means
5.7 Confidence Intervals with Paired Data	

Chapter 6: Hypothesis Testing Sections 6.1-6.8 Week 11 - Week 13 6.1 Large-Sample Tests for a Population Mean 6.2 Drawing Conclusions From the Results of Hypothesis Tests 6.3 Tests for a Population Proportion 6.4 Small-Sample Tests for a Population Mean 6.5 Large-Sample Tests for the Difference Between Two Means 6.6 Tests for the Difference Between Two Proportions 6.7 Small-Sample Tests for the Difference Between Two Means 6.8 Tests With Paired Data Chapter 7: Correlation and Simple Linear Regression

Sections 7.1, 7.2 7.1 Correlation

7.2 The Least-Squares Line

Week 14

One Semester Course Syllabus (for those who wish to include simulation) Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 Week 1 1.1 Sampling **1.2 Summary Statistics 1.3 Graphical Summaries** Chapter 2: Probability Sections 2.1-2.5 Week 2 - Week 4 2.1 Basic Ideas 2.2 Counting Methods (Optional) 2.3 Conditional Probability and Independence 2.4 Random Variables 2.5 Linear Functions of Random Variables Chapter 4: Commonly Used Distributions Sections 4.1-4.3, 4.5, 4.9-4.11 Week 4 - Week 7 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.5 The Normal Distribution 4.9 Probability Plots 4.10 The Central Limit Theorem 4.11 Simulation **Chapter 5: Confidence Intervals** Sections 5.1-5.8 Week 8 - Week 10 5.1 Large-Sample Confidence Intervals for a Population Mean 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Population Mean 5.4 Confidence Intervals for the Difference Between Two Means 5.5 Confidence Intervals for the Difference Between Two Proportions 5.6 Small-Sample Confidence Intervals for the Difference Between Two Means 5.7 Confidence Intervals with Paired Data 5.8 Using Simulation to Construct Confidence Intervals

Chapter 6: Hypothesis Testing Sections 6.1-6.8, 6.13-6.15 6.1 Large-Sample Tests for a Population Mean 6.2 Drawing Conclusions From the Results of Hypothesis Tests 6.3 Tests for a Population Proportion 6.4 Small-Sample Tests for a Population Mean 6.5 Large-Sample Tests for the Difference Between Two Means 6.6 Tests for the Difference Between Two Means 6.6 Tests for the Difference Between Two Means 6.7 Small-Sample Tests for the Difference Between Two Means 6.8 Tests With Paired Data 6.13 Power 6.14 Multiple Tests 6.15 Using Simulation to Perform Hypothesis Tests

Week 14

Chapter 7: Correlation and Simple Linear Regression
Sections 7.1, 7.2
7.1 Correlation
7.2 The Least-Squares Line

One Semester Course Syllabus (for those who wish to include propagation of error and simulation)

Chapter 1: Sampling and Descriptive Statistics	
Sections 1.1-1.3	Week 1
1.1 Sampling	
1.2 Summary Statistics	
1.3 Graphical Summaries	
Chapter 2: Probability	
Sections 2.1, 2.3-2.5	Week 2 - Week 3
2.1 Basic Ideas	
2.3 Conditional Probability and Independence	
2.4 Random Variables	
2.5 Linear Functions of Random Variables	
Chapter 3: Propagation of Error	
Sections 3.1-3.3	Week 4 - Week 5
3.1 Measurement Error	
3.2 Linear Combinations of Measurements	
3.3 Uncertainties for Functions of One Measurement	
Chapter 4: Commonly Used Distributions	
Sections 4.1-4.3, 4.5, 4.9-4.11	Week 6 - Week 9
4.1 The Bernoulli Distribution	
4.2 The Binomial Distribution	
4.3 The Poisson Distribution	
4.5 The Normal Distribution	
4.9 Probability Plots	
4.10 The Central Limit Theorem	
4.11 Simulation	
Chapter 5: Confidence Intervals	
Sections 5.1-5.8	Week 9 - Week 11
5.1 Large-Sample Confidence Intervals for a Population M	ean
5.2 Confidence Intervals for Proportions	
5.3 Small-Sample Confidence Intervals for a Population M	ean
5.4 Confidence Intervals for the Difference Between Two I	Means
5.5 Confidence Intervals for the Difference Between Two I	Proportions
5.6 Small-Sample Confidence Intervals for the Difference	Between Two Means
5.7 Confidence Intervals with Paired Data	
5.8 Using Simulation to Construct Confidence Intervals	

Chapter 6: Hypothesis Testing

Sections 6.1-6.8, 6.15

Week 12 - Week 14

6.1 Large-Sample Tests for a Population Mean

6.2 Drawing Conclusions From the Results of Hypothesis Tests

6.3 Tests for a Population Proportion

6.4 Small-Sample Tests for a Population Mean

6.5 Large-Sample Tests for the Difference Between Two Means

6.6 Tests for the Difference Between Two Proportions

6.7 Small-Sample Tests for the Difference Between Two Means

6.8 Tests With Paired Data

6.15 Using Simulation to Perform Hypothesis Tests

One Semester Course Syllabus: (for those who wish to emphasize factorial experiments and quality control)

Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3	Week 1
1.1 Samping 1.2 Summary Statistics	
1.2 Summary Statistics	
1.5 Oraphical Summaries	
Chapter 2: Probability	
Sections 2.1, 2.3, 2.4	Week 2 - Week 3
2.1 Basic Ideas	
2.3 Conditional Probability and Independence	
2.4 Random Variables	
Chapter 3: Propagation of Error	
Section 3.1	Week 3
3.1 Measurement Error	
Chapter 4: Commonly Used Distributions	
Sections 4.1-4.3, 4.5, 4.7, 4.9, 4.10	Week 4 -Week 6
4.1 The Bernoulli Distribution	
4.2 The Binomial Distribution	
4.3 The Poisson Distribution	
4.5 The Normal Distribution	
4.7 The Exponential Distribution	
4.9 Probability Plots	
4.10 The Central Limit Theorem	
Chapter 5: Confidence Intervals	
Sections 5.1-5.7	Week 7 - Week 8
5.1 Large-Sample Confidence Intervals for a Population M	Iean
5.2 Confidence Intervals for Proportions	
5.3 Small-Sample Confidence Intervals for a Population M	Iean
5.4 Confidence Intervals for the Difference Between Two	Means
5.5 Confidence Intervals for the Difference Between Two	Proportions
5.6 Small-Sample Confidence Intervals for the Difference	Between Two Means
5.7 Confidence Intervals with Paired Data	

Chapter 6: Hypothesis Testing	
Sections 6.1-6.8	Week 9 - Week 11
6.1 Large-Sample Tests for a Population Mean	
6.2 Drawing Conclusions From the Results of Hypothesis	Tests
6.3 Tests for a Population Proportion	
6.4 Small-Sample Tests for a Population Mean	
6.5 Large-Sample Tests for the Difference Between Two	Means
6.6 Tests for the Difference Between Two Proportions	
6.7 Small-Sample Tests for the Difference Between Two	Means
6.8 Tests With Paired Data	
Chapter 7: Correlation and Simple Linear Regression	
Section 7.1	Week 12
7.1 Correlation	
Chapter 9: Factorial Experiments	
Sections 9.1-9.3	Week 12 - Week 13
9.1 One-Factor Experiments	
9.2 Pairwise Comparisons in One-Factor Experiments	
9.3 Two-Factor Experiments	
Chapter 10: Statistical Quality Control	
Sections 10.1-10.3	Week 14
10.1 Basic Ideas	
10.2 Control Charts for Variables	
10.3 Control Charts for Attributes	

One Semester Course Syllabus: (For those who want to put emphasis on regression and statistical quality control charts)

 Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 1.1 Sampling 1.2 Summary Statistics 1.3 Graphical Summaries 	Week 1
Chapter 2: Probability Sections 2.1, 2.3, 2.4 2.1 Basic Ideas 2.3 Conditional Probability and Independence 2.4 Random Variables	Week 2 - Week 3
 Chapter 4: Commonly Used Distributions Sections 4.1-4.3, 4.5, 4.7, 4.9, 4.10 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.5 The Normal Distribution 4.7 The Exponential Distribution 4.9 Probability Plots 4.10 The Central Limit Theorem 	Week 4 - Week 6
 Chapter 5: Confidence Intervals Sections 5.1-5.7 5.1 Large-Sample Confidence Intervals for a Population N 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Population N 5.4 Confidence Intervals for the Difference Between Two 5.5 Confidence Intervals for the Difference Between Two 5.6 Small-Sample Confidence Intervals for the Difference 5.7 Confidence Intervals with Paired Data 	Week 7 - Week 8 Mean Mean Proportions Between Two Means
Chapter 6: Hypothesis Testing Sections 6.1-6.8 6.1 Large-Sample Tests for a Population Mean 6.2 Drawing Conclusions From the Results of Hypothesis 6.3 Tests for a Population Proportion 6.4 Small-Sample Tests for a Population Mean 6.5 Large-Sample Tests for the Difference Between Two	Week 9 - Week 11 Tests Means

6.6 Tests for the Difference Between Two Proportions 6.7 Small-Sample Tests for the Difference Between Two	Means
6.8 Tests With Paired Data	Wieans
Chapter 7: Correlation and Simple Linear Regression	
Sections 7.1-7.4	Week 12 - Week 13
7.1 Correlation	
7.2 The Least-Squares Line	
7.3 Uncertainties in the Least-Squares Coefficients	
7.4 Checking Assumptions and Transforming Data	
Chapter 10: Statistical Quality Control	
Sections 10.1-10.3	Week 14
10.1 Basic Ideas	
10.2 Control Charts for Variables	
10.3 Control Charts for Attributes	

One Semester Course Syllabus: (For those who want to put emphasis on regression and factorial experiments)

Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 1.1 Sampling	Week 1
1.2 Summary Statistics	
1.3 Graphical Summaries	
Chapter 2: Probability	
Sections 2.1, 2.3, 2.4	Week 2
2.1 Basic Ideas	
2.3 Conditional Probability and Independence	
2.4 Random Variables	
Chapter 4: Commonly Used Distributions	
Sections 4.1-4.3, 4.5, 4.7, 4.9, 4.10	Week 3 - Week 5
4.1 The Bernoulli Distribution	
4.2 The Binomial Distribution	
4.3 The Poisson Distribution	
4.5 The Normal Distribution	
4.7 The Exponential Distribution	
4.9 Probability Plots	
4.10 The Central Limit Theorem	
Chapter 5: Confidence Intervals	
Sections 5.1-5.7	Week 6 - Week 7
5.1 Large-Sample Confidence Intervals for a Population N	Mean
5.2 Confidence Intervals for Proportions	
5.3 Small-Sample Confidence Intervals for a Population N	Mean
5.4 Confidence Intervals for the Difference Between Two	Means
5.5 Confidence Intervals for the Difference Between Two	Proportions
5.6 Small-Sample Confidence Intervals for the Difference	e Between Two Means
5.7 Confidence Intervals with Paired Data	

Chapter 6: Hypothesis Testing	
Sections 6.1-6.8	Week 8 - Week 10
6.1 Large-Sample Tests for a Population Mean	
6.2 Drawing Conclusions From the Results of Hypothesis	s Tests
6.3 Tests for a Population Proportion	
6.4 Small-Sample Tests for a Population Mean	
6.5 Large-Sample Tests for the Difference Between Two	Means
6.6 Tests for the Difference Between Two Proportions	
6.7 Small-Sample Tests for the Difference Between Two	Means
6.8 Tests With Paired Data	
 Chapter 7: Correlation and Simple Linear Regression Sections 7.1-7.4 7.1 Correlation 7.2 The Least-Squares Line 7.3 Uncertainties in the Least-Squares Coefficients 7.4 Checking Assumptions and Transforming Data 	Week 11 - Week 12
 Chapter 9: Factorial Experiments Sections 9.1-9.3 9.1 One-Factor Experiments 9.2 Pairwise Comparisons in One-Factor Experiments 9.3 Two-Factor Experiments 	Week 13 - Week 14

STATISTICS FOR ENGINEERS AND SCIENTISTS by William Navidi	Sample Syllabus 8
Two Semester Course Syllabus: (Basic)	
1 _{st} Semester:	
Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 1.1 Sampling 1.2 Summary Statistics 1.3 Graphical Summaries	Week 1
 Chapter 2: Probability Sections 2.1, 2.3, 2.4, 2.5 2.1 Basic Ideas 2.3 Conditional Probability and Independence 2.4 Random Variables 2.5 Linear Functions of Random Variables 	Week 2 - Week 4
 Chapter 3: Propagation of Error Sections 3.1-3.4 3.1 Measurement Error 3.2 Linear Combinations of Measurements 3.3 Uncertainties for Functions of One Measurement 3.4 Uncertainties for Functions of Several Measurements 	Week 5 - Week 6
 Chapter 4: Commonly Used Distributions Sections 4.1-4.10 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.4 Some Other Discrete Distributions 4.5 The Normal Distribution 4.6 The Lognormal Distribution 4.7 The Exponential Distribution 4.8 The Gamma and Weibull Distributions 4.9 Probability Plots 4.10 The Central Limit Theorem 	Week 6 - Week 10
 Chapter 5: Confidence Intervals Sections 5.1-5.7 5.1 Large-Sample Confidence Intervals for a Population M 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Population M 5.4 Confidence Intervals for the Difference Between Two I 5.5 Confidence Intervals for the Difference Between Two I 5.6 Small-Sample Confidence Intervals for the Difference Intervals 	Week 11 - Week 14 Tean Tean Means Proportions Between Two Means

2nd Semester:

Chapter 6: Hypothesis Testing Sections 6.1-6.14 Week 1 - Week 5 6.1 Large-Sample Tests for a Population Mean 6.2 Drawing Conclusions From the Results of Hypothesis Tests 6.3 Tests for a Population Proportion 6.4 Small-Sample Tests for a Population Mean 6.5 Large-Sample Tests for the Difference Between Two Means 6.6 Tests for the Difference Between Two Proportions 6.7 Small-Sample Tests for the Difference Between Two Means 6.8 Tests With Paired Data 6.9 Distribution-Free Tests 6.10 The Chi-Square Test 6.11 The F Test for Equality of Variance 6.12 Fixed-Level Testing 6.13 Power 6.14 Multiple Tests Chapter 7: Correlation and Simple Linear Regression Sections 7.1-7.4 Week 6 - Week 7 7.1 Correlation 7.2 The Least-Squares Line 7.3 Uncertainties in the Least-Squares Coefficients 7.4 Checking Assumptions and Transforming Data Chapter 8: Multiple Regression Sections 8.1-8.3 Week 8 - Week 9 8.1 The Multiple Regression Model 8.2 Confounding and Collinearity 8.3 Model Selection **Chapter 9: Factorial Experiments** Sections 9.1-9.4 Week 10 - Week 12 9.1 One-Factor Experiments 9.2 Pairwise Comparisons in One-Factor Experiments 9.3 Two-Factor Experiments 9.4 Randomized Complete Block Designs Chapter 10: Statistical Quality Control Sections 10.1-10.5 Week 13 - Week 14 10.1 Basic Ideas 10.2 Control Charts for Variables 10.3 Control Charts for Attributes 10.4 The CUSUM chart **10.5 Process Capability**

Two Semester Course Syllabus: (For those who want to emphasize simulation and computation using software)

1st Semester:

Chapter 1: Sampling and Descriptive Statistics Sections 1.1-1.3 1.1 Sampling 1.2 Summary Statistics 1.3 Graphical Summaries	Week 1
Chapter 2: Probability Sections 2.1, 2.3, 2.4, 2.5 2.1 Basic Ideas 2.3 Conditional Probability and Independence 2.4 Random Variables 2.5 Linear Functions of Random Variables	Week 2 - Week 4
 Chapter 3: Propagation of Error Sections 3.1-3.3 3.1 Measurement Error 3.2 Linear Combinations of Measurements 3.3 Uncertainties for Functions of One Measurement 	Week 5
 Chapter 4: Commonly Used Distributions Sections 4.1-4.11 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.4 Some Other Discrete Distributions 4.5 The Normal Distribution 4.6 The Lognormal Distribution 4.7 The Exponential Distribution 4.8 The Gamma and Weibull Distributions 4.9 Probability Plots 4.10 The Central Limit Theorem 4.11 Simulation 	Week 6 - Week10
 Chapter 5: Confidence Intervals Sections 5.1-5.8 5.1 Large-Sample Confidence Intervals for a Population M 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Population M 5.4 Confidence Intervals for the Difference Between Two 5.5 Confidence Intervals for the Difference Between Two 5.6 Small-Sample Confidence Intervals for the Difference 5.7 Confidence Intervals with Paired Data 5.8 Using Simulation to Construct Confidence Intervals 	Week 11 - Week 14 Iean Iean Means Proportions Between Two Means

2nd Semester:

Chapter 6: Hypothesis Testing	
Sections 6.1-6.15	Week 1-Week 5
6.1 Large-Sample Tests for a Population Mean	
6.2 Drawing Conclusions From the Results of Hypothesis	Tests
6.3 Tests for a Population Proportion	
6.4 Small-Sample Tests for a Population Mean	
6.5 Large-Sample Tests for the Difference Between Two I	Means
6.6 Tests for the Difference Between Two Proportions	
6.7 Small-Sample Tests for the Difference Between Two I	Means
6.8 Tests With Paired Data	
6.9 Distribution-Free Tests	
6.10 The Chi-Square Test	
6.11 The F Test for Equality of Variance	
6.12 Fixed-Level Testing	
6.13 Power	
6.14 Multiple Tests	
6.15 Using Simulation to Perform Hypothesis Tests	
Chapter 7: Correlation and Simple Linear Regression	
Sections 7.1-7.4	Week 6 - Week 7
7.1 Correlation	
7.2 The Least-Squares Line	
7.3 Uncertainties in the Least-Squares Coefficients	
7.4 Checking Assumptions and Transforming Data	
Chapter 8: Multiple Regression	
Sections 8.1-8.3	Week 8 - Week 9
8.1 The Multiple Regression Model	
8.2 Confounding and Collinearity	
8.3 Model Selection	
Chapter 9: Factorial Experiments	
Sections 9.1-9.4	Week 10 - Week 12
9.1 One-Factor Experiments	
9.2 Pairwise Comparisons in One-Factor Experiments	
9.3 Two-Factor Experiments	
9.4 Randomized Complete Block Designs	
Chapter 10: Statistical Quality Control	
Sections 10.1-10.4	Week 13 - Week 14
10.1 Basic Ideas	
10.2 Control Charts for Variables	
10.3 Control Charts for Attributes	
10.4 The CUSUM chart	

Two Semester Course Syllabus: (For those who want to emphasize probability theory in the first semester)

1st Semester:

Chapter 1: Sampling and Descriptive Statistics Sections 1 1-1 3	Week 1
1.1 Sampling 1.2 Summary Statistics 1.3 Graphical Summaries	
 Chapter 2: Probability Sections 2.1-2.6 2.1 Basic Ideas 2.2 Counting Methods (Optional) 2.3 Conditional Probability and Independence 2.4 Random Variables 2.5 Linear Functions of Random Variables 2.6 Jointly Distributed Random Variables (Optional) 	Week 2 - Week 6
 Chapter 3: Propagation of Error Sections 3.1-3.3 3.1 Measurement Error 3.2 Linear Combinations of Measurements 3.3 Uncertainties for Functions of One Measurement 	Week 7
 Chapter 4: Commonly Used Distributions Sections 4.1-4.10 4.1 The Bernoulli Distribution 4.2 The Binomial Distribution 4.3 The Poisson Distribution 4.4 Some Other Discrete Distributions 4.5 The Normal Distribution 4.6 The Lognormal Distribution 4.7 The Exponential Distribution 4.8 The Gamma and Weibull Distributions 4.9 Probability Plots 4.10 The Central Limit Theorem 	Week 8 - Week 11
 Chapter 5: Confidence Intervals Sections 5.1-5.7 5.1 Large-Sample Confidence Intervals for a Populat 5.2 Confidence Intervals for Proportions 5.3 Small-Sample Confidence Intervals for a Populat 5.4 Confidence Intervals for the Difference Between 5.5 Confidence Intervals for the Difference Between 5.6 Small-Sample Confidence Intervals for the Difference Between 5.7 Confidence Intervals with Paired Data 	Week 12 - Week 14 ion Mean Two Means Two Proportions rence Between Two Means

2nd Semester:

Chapter 6: Hypothesis Testing	
Sections 6.1-6.14	Week 1 - Week 5
6.1 Large-Sample Tests for a Population Mean	
6.2 Drawing Conclusions From the Results of Hypothesis	Tests
6.3 Tests for a Population Proportion	
6.4 Small-Sample Tests for a Population Mean	
6.5 Large-Sample Tests for the Difference Between Two I	Means
6.6 Tests for the Difference Between Two Proportions	
6.7 Small-Sample Tests for the Difference Between Two Means	
6.8 Tests With Paired Data	
6.9 Distribution-Free Tests	
6.10 The Chi-Square Test	
6.11 The F Test for Equality of Variance	
6.12 Fixed-Level Testing	
6.13 Power	
6.14 Multiple Tests	
Chapter 7: Correlation and Simple Linear Regression	
Sections 7.1-7.4	Week 6 - Week 7
7.1 Correlation	
7.2 The Least-Squares Line	
7.3 Uncertainties in the Least-Squares Coefficients	
7.4 Checking Assumptions and Transforming Data	
Chapter 8: Multiple Regression	
Sections 8.1-8.4	Week 8 - Week 9
8.1 The Multiple Regression Model	
8.2 Confounding and Collinearity	
8.3 Model Selection	
Chapter 9: Factorial Experiments	
Sections 9.1-9.5	Week 10 - Week 12
9.1 One-Factor Experiments	
9.2 Pairwise Comparisons in One-Factor Experiments	
9.3 Two-Factor Experiments	
9.4 Randomized Complete Block Designs	
9.5 2^p Factorial Experiments	
Chapter 10: Statistical Quality Control	
Sections 10.1-10.5	Week 13 - Week 14
10.1 Basic Ideas	
10.2 Control Charts for Variables	
10.3 Control Charts for Attributes	
10.4 The CUSUM chart	
10.5 Process Capability	