

# IB DP Math Studies

## Unit 2 / Topic 4: Statistical Applications

1<sup>st</sup> Quarter ♦ 2016-2017

B-DAYS

© This syllabus is a guide only and is subject to change. Any changes will be written on the board.  
It is your responsibility to check the board each day and copy the correct assignment into your planner. ☺

DATE	TOPIC	TOPIC NUMBER	TEXT REFERENCE	ASSIGNMENT	PA#
October 3 (M – B) Day 1	Normal Distribution	4.1	Chapter 10	(September 28: Read pages 300-303 and complete p303 (10A: 1-3)) p 303 (10A: 4, 6, 9) p 307 (10B: 3, 5, 6, 9)	PA9
October 5 (W – B) Day 2	Normal Distribution – the Inverse Normal <b>IBDP Math Studies PRE-ASSESSMENT</b>	4.1	Chapter 10	p309 (10C: 2, 3, 5, 6, 7, 9)	PA10
October 7 (F – B) Day 3	Chi-squared Test	4.4	Chapter 11	Read pages 334-340 p 337 (11E.1: 2) p 341 (11E.2: 1)	PA11
<b>October 10 (M): Professional Day for Staff – No School for Students</b>					
October 12 (W – B) Day 4	<b>Quiz: Normal Distribution</b> Chi-squared Test	4.4	Chapter 11	Chi-squared Test Practice WS	PA12
October 14 (F – B) Day 5	Limitations of the Chi-Squared Test	4.4	Chapter 11	Read pages 342-344 p 343 (11E.3: 1) p 344 (11E.4: 1)	PA13
October 18 (Tu – B) Day 6	<b>Quiz: Chi-squared test</b> Bivariate Data and Correlation	4.2	Chapter 11	Read pages 316-325 p 319 (11A: 1, 2, 4, 5, 6) p 322 (11B.1: 1, 2, 6) p 325 (11B.2: 1)	PA14
October 20 (Th – B) Day 7	Correlation Linear Regression	4.2 4.3	Chapter 11	Read pages 326-330 p 327 (11B.3: 1, 2) p 330 (11C: 1)	PA15
October 25 (Tu – B) Day 8	<b>Quiz: Correlation</b> Linear Regression	4.3	Chapter 11	Linear Regression Practice WS	PA16
October 27 (Th – B) Day 9	Topic 4 Review	4.1-4.4	Chapters 10, 11	Finish the Topic 4 Review AND CHECK IT BEFORE NEXT CLASS using the posted key	PA17
October 31 (M – B) Day 10	<b>SUMMATIVE ASSESSMENT – Topic 4: Statistical Applications</b>	4.1-4.4	Chapters 10, 11	Read pages 484-491 p 486 (16A: 2) p 488-489 (16B: 6, 8)	PA18

## *Topic 4 Overview*

*Students will explore and analyze data which has a normal distribution and calculate probabilities. Students will analyze bivariate data using the concept of linear correlation and will calculate and interpret Pearson's Product-Moment Correlation Coefficient and equations of lines of best fit by-eye and using a GDC. Students will understand the  $\chi^2$  test for independence and use it to analyze a set of data.*

## *The BIG Idea for Topic 4 is . . .*

- ◆ Data has several types of models and representations, which are used to organize, manipulate and predict outcomes.

## *Topic 4 Essential Questions*

*Be sure to answer these as we progress through the unit. Some or all of them may be used as essay questions on graded assessments. 😊*

- ◆ How do statistical measures help us analyze data?
- ◆ How can data be used to support a position or find a relationship?
- ◆ How can you explain what is revealed (or concealed) by using statistical analysis?
- ◆ What limitations exist when using a line of best fit to make predictions?
- ◆ How is the chi-squared test related to probability and the idea of independent events?