

**JAIPURIA INSTITUTE OF MANAGEMENT  
PGDM; TRIMESTER I; ACADEMIC YEAR 2018-19**

Course Code and title	IT101 - Data Interpretation and Excel (DI&E)
Credits	1.5
Term and Year	I Term; Year: 2018-19
Course Pre-requisite(s)	None
Course Requirement(s)	B mathematics (X <sup>th</sup> level)
Course Schedule (day and time of class)	As per time table released by PMC
Classroom # (Location)	Computer Lab /As per allotted by PMC
Course Instructor	Faculty Name
Course Instructor Email	As applicable
Course Instructor Phone (Office)	As applicable
Student Consultation Hours	4:00 pm – 5:00 pm every Wednesday
Office location	Faculty room number

**Course Overview:**

In the world of technology, companies collect tremendous amount of data with relative ease. Infact, both individuals and companies now have more data than they can handle. However, the data are usually meaningless until they are subject to transformation and interpretation. Understanding of data in way to be able to communicate and present the intended message is a challenge for any individual.

The course aims at helping the student to understand the tenets of data through the most popular analysis tool – MS-Excel. The objective of the course is to make student at ease with MS-Excel so as to re-organize the data to draw meaningful interpretations and possible conclusions out of it.

**Course Learning Outcome (CLO)**

At the end of the course, the students would be able to: -

CLO 1: Explain different types of data and its relevance in business. (K)

CLO 2: Demonstrate the ability to use MS-Excel for a meaningful data representation. (K & S)

CLO 3: Derive business understanding out of the data. (K, S & A)

**LINKAGE OF COURSE**

**Before:** The course links the learning attained by the students in class X<sup>th</sup> and take them to the next level of integrating the learning to business application.

**After:** The learnings of this course will be useful for other courses of core functional areas like, Statistics, Economics, and Marketing. The students will use the tools and knowledge provided in this course to analyses and report the data they will get in upcoming courses.

**MAPPING OF CLOS WITH KSA**

CLOs	Knowledge (K)	Skills (S)	Attitude (A)
CLO 1	X		
CLO 2	X	X	
CLO 3	X	X	X

### MAPPING OF CLOS WITH PLOS

CLOs/ PLOS	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
	Communicate effectively and display interpersonal skills	Demonstrate leadership and teamwork towards achievement of organizational goals	Apply relevant conceptual frameworks for effective decision making	Develop an entrepreneurial mindset for optimal business solutions	Evaluate the relationship between business environment and organizations	Appreciate sustainable and ethical business practices	Leverage technology for business decisions	Demonstrate capability as an independent learner
<b>CLO1</b>			X		X			
<b>CLO2</b>			X	X			X	X
<b>CLO3</b>			X	X			X	

### MAPPING OF CLOS WITH GAS

CLOs/PLOs	GA1	GA2	GA3	GA4	GA5	GA6	GA7	GA8
	Self-initiative	Deep discipline knowledge	Critical thinking & Problem solving	Humility, Team-Building and Leadership Skills	Open and Clear Communication	Global outlook	Ethical competency & sustainable mindset	Entrepreneurial and innovative
<b>CLO1</b>		X	X					
<b>CLO2</b>		X	X					X
<b>CLO3</b>		X	X					X

### VED FRAMEWORK

Module							
<table border="1"> <tr> <td style="background-color: #ffffcc;">Pre-class</td> </tr> <tr> <td style="background-color: #c6efce;">In-class</td> </tr> <tr> <td style="background-color: #ffe0b2;">Beyond class</td> </tr> </table>	Pre-class	In-class	Beyond class	Vital (prerequisite or basic knowledge or skills)	Essential (Non-imperative yet significant)	Desirable (adds substance, breadth, or interest to a subject or skill)	
Pre-class							
In-class							
Beyond class							
Module I: Understanding data and MS-Excel	<table border="1"> <tr> <td style="background-color: #ffffcc;">Basic mathematical concepts (Xth level)</td> </tr> <tr> <td style="background-color: #c6efce;">Data and its representation MS-Excel basic understanding</td> </tr> </table>	Basic mathematical concepts (Xth level)	Data and its representation MS-Excel basic understanding	<table border="1"> <tr> <td style="background-color: #c6efce;">Relevance and scope of data types Data spread Grouping of data into bins.</td> </tr> </table>	Relevance and scope of data types Data spread Grouping of data into bins.	<table border="1"> <tr> <td style="background-color: #ffe0b2;">How data regulates analysis and in turn analytics industry.</td> </tr> </table>	How data regulates analysis and in turn analytics industry.
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Module II: Data description	<table border="1"> <tr> <td style="background-color: #c6efce;">Basics of sum, count, average, median and mode</td> </tr> </table>	Basics of sum, count, average, median and mode	<table border="1"> <tr> <td style="background-color: #c6efce;">Use of Analysis Tool Pack.  Interpreting data based on central tendency and spread.</td> </tr> </table>	Use of Analysis Tool Pack.  Interpreting data based on central tendency and spread.	<table border="1"> <tr> <td style="background-color: #ffe0b2;">How industry uses central tendency and spread for performing its basic operations.</td> </tr> </table>	How industry uses central tendency and spread for performing its basic operations.	
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Module III: Querying data	<table border="1"> <tr> <td style="background-color: #c6efce;">Using basic sorting and filtering techniques/Vlookup()</td> </tr> </table>	Using basic sorting and filtering techniques/Vlookup()	<table border="1"> <tr> <td style="background-color: #c6efce;">Appreciating different approaches to arrange and extract data</td> </tr> </table>	Appreciating different approaches to arrange and extract data	<table border="1"> <tr> <td style="background-color: #ffe0b2;">Develop understanding of how to extract, arrange and present data for further dissemination.</td> </tr> </table>	Develop understanding of how to extract, arrange and present data for further dissemination.	
Using basic sorting and filtering techniques/Vlookup()							
Appreciating different approaches to arrange and extract data							
Develop understanding of how to extract, arrange and present data for further dissemination.							
Module IV: Summarizing and presenting data	<table border="1"> <tr> <td style="background-color: #c6efce;">Conditional based grouping of data (if(), sumifs(), countis())</td> </tr> </table>	Conditional based grouping of data (if(), sumifs(), countis())	<table border="1"> <tr> <td style="background-color: #c6efce;">Presenting it into graphical format</td> </tr> </table>	Presenting it into graphical format	<table border="1"> <tr> <td style="background-color: #ffe0b2;">Finding out the most appropriate technique for presenting data</td> </tr> </table>	Finding out the most appropriate technique for presenting data	
Conditional based grouping of data (if(), sumifs(), countis())							
Presenting it into graphical format							
Finding out the most appropriate technique for presenting data							

### REFERENCES

Case Studies

### SESSION PLANS:

S. No.	Topic /Sub topic	Session Details	
1.	Module I: Understanding ... data and its types	Readings	Case Study 1: Data Dumps
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)

	(Quantitative and qualitative data)  (Business Implications: Differentiating data into quantitative and qualitative basket)	CLO	CLO1 & 2
		SLO	Students would be able to understand different types of data and its usage for a given business situation
2.	Understanding ... MS-Excel as spreadsheet  (Business Implications: Grouping of data into manageable forms  Techniques learned: Count(), frequency(), range creation – min() max() etc.)	Readings	Case Study 1: Data Dumps
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1 & 2
		SLO	Students would get familiar with working of MS-Excel and how it is associated with data handling Students would be able to collate data into manageable form though techniques like frequency distribution, class intervals etc
3.	Module II: Data description: Interpreting central tendency for business situations  (Business Implications: finding out central point and most preferred;  Techniques learned: average, median, mode)	Readings	Case 2: President Inns Guest database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to process data into meaningful form using methods of summation, averaging, median, mode and interpret them for business situation.
4.	Data description: interpreting dispersion in data for business situations  (Business Implications: able to understand spread of data;  Techniques learned: standard deviation, variance and coefficient of variation)	Readings	Case 2: President Inns Guest database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to understand concept of dispersion and use it to interpret data
5.	Data description: Discovering relationship between data sets  (Business Implications: Use of correlation, regression, BEP etc;  Techniques learned: Analysis tool pack, sum, product, division etc)	Readings	Case 2: President Inns Guest database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to discover relationships hidden in the data and use it in business
6.	Review and Exercises – I	Readings	Exercises
		Pedagogy	Exercises

	(based on session 1-6)	CLO	CLO1 & 2
		SLO	At the end of the session, the student will be able to apply the concepts and tools learnt in session 1-5.
7.	Module III: Querying the data:  (Business implications: extract top/bottom performers;  Techniques learned: sorting and filtering to arrange data)	Readings	Case 3: Regional Sales Database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40)
		CLO	CLO1, 2 & 3
		SLO	Students would learn the art of querying the data through sorting and filtering enabling them to use it for business situation like extracting top performers.
8.	Querying the data:  (Business Implications: extracting associated information;  Techniques learned: Vlookup)	Readings	Case 3: Regional Sales Database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to extract relevant business information based on a criteria and use the same for a given situation.
9.	Module IV: Summarizing and presenting data:  (Business Implications: Grouping data based on condition;  Techniques learned: SUMIFS(), COUNTIFS(), AVERAGEIFS())	Readings	Case 4: Store Database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to query data based on conditions given for a situation
10.	Data Presentation:  (Business Implications: presenting data in a meaningful manner;  Techniques learned: charting)	Readings	Case 4: Store Database
		Pedagogy	Discussion (15 min), demonstration (20 min) and experiential activity (40 min)
		CLO	CLO1, 2 & 3
		SLO	Students would be able to present data through charts
11.	Review and Exercises – II  (based on session 7-10)	Readings	Exercises
		Pedagogy	Exercises
		CLO	CLO1, 2, 3 & 4
		SLO	At the end of the session, the student will be able to apply the concepts and tools learnt in session 7-10.
12.	Summing up the course	Readings	--
		Pedagogy	Discussion
		CLO	CLO1, 2, 3 & 4
		SLO	The session weaves and winds up the whole course.

**TIME BUDGETING IN COURSE PLANNING:**

Activity	Description	Time Budgeted
Classes	2-3 hours per week for 12 weeks	30 hours
Reading	Prescribed readings and making notes	30 hours

Preparation of set questions, exercises and problems	Including shared and group exercises	15 hours
Preparation of assignment	Reading and writing	15 hours
Study and revision for test and end of Trimester examination	Self-preparations	15 hours
<b>TOTAL</b>		105 hours

#### ASSESSMENT COMPONENTS

S. No.	Assessment Task	Assessment Type	Weightage	Marks	CLO Measured
1.	Quiz	LMS	20%	10	CLO 1 & 2
2.	Assignment	Lab activity/LMS – Group/individual	30%	15	CLO 2 & 3
3.	Class participation	Class activity	10%	5	CLO 1 & 2
4.	End term hall examination	Hall exam	40%	20	CLO 1, 2 & 3
		Total	100%	50	

#### ASSESSMENT TASK DESCRIPTION

##### *Quiz*

**Weightage:** 20% (refer Rubric of evaluation at the end).

**Description:** Students will be examined on basic understanding of the concepts and excel techniques.

**Expectation from students:**

**Suggested time to devote to this task:** 2-3 hours a week

**Submission details:** LMS

**Feedback and return of work:** Quiz cannot be returned, but feedback will be given immediately after assessment.

**Pre/In/beyond class:** In-class

##### *Assignment*

**Weightage:** 30% (refer Rubric of evaluation at the end).

**Description:** Student will be examined on comprehension of given dataset.

**Expectation from students:**

**Suggested time to devote to this task:** 2-3 hours a week

**Submission details:** Soft copy / LMS

**Feedback and return of work:** Assignment cannot be returned, but feedback will be given within a weeks' time.

**Pre/In/beyond class:** In-class

##### *Class participation*

**Weightage:** 10% (refer Rubric of evaluation at the end).

**Description:** Student will be examined on actives participation and troubleshooting activities

**Expectation from students:**

**Suggested time to devote to this task:** In-class time

**Submission details:** In-class

**Feedback and return of work:** Feedback will be given immediately in the class.

**Pre/In/beyond class:** In-class

##### *End term hall examination*

**Weightage:** 40% (refer Rubric of evaluation at the end).

**Description:** Students will be examined through a case analysis and comprehension.

**Expectation from students:****Suggested time to devote to this task:** 4-5 hours a week**Submission details:** Hall examination**Feedback and return of work:** No feedback and answer scripts will not be returned.**Pre/In/beyond class:** beyond class**INSTRUCTIONS:**

Students will be expected to maintain a daily log of their learning and make an action plan. The continuous evaluation tools would be implemented as per schedule and collected for evaluation.

Students are encouraged to visit videos available on Internet – YouTube, TED talks, and readings available at websites like course era, etc.

**RUBRIC FOR CLOS**

<b>CLOs</b>	<b>Level 1: Beginning</b>	<b>Level 2: Average</b>	<b>Level 3: Accomplished</b>
<b>CLO1</b> Explain different types of data and its relevance in business.	Is not able to differentiate data or apply conceptual understanding	Is able to identify and apply conceptual understanding occasionally	Is able to identify and apply concept most of the time
<b>CLO2</b> Demonstrate the ability to use MS-Excel for a meaningful compilation of data.	Is not able to identify and adapt to techniques for solving situations	Demonstrate somewhat application of techniques to situations, some of the time	Demonstrate application of techniques to situations most of the time
<b>CLO3</b> Derive business understanding out of the data. (K & S)	Is neither able to identify problems nor possible techniques for solving a situation	Is somewhat able to identify the problem and envisage the appropriate technique	Is able to identify and synthesize the problem most of the time and envisage and apply appropriate technique

**RUBRICS FOR QUIZ**

<b>POOR</b>	<b>FAIR</b>	<b>GOOD</b>	<b>EXCELLENT</b>
<b>POINTS 0-3.4</b>	<b>POINTS 3.5-5.9</b>	<b>POINTS 6-7.9</b>	<b>POINTS 8 – 10</b>
<b>ONLY UP TO 35% ANSWERS ARE CORRECT</b>	<b>BETWEEN 35 – 50% ANSWERS ARE CORRECT</b>	<b>BETWEEN 60 – 80% ANSWERS ARE CORRECT</b>	<b>80% OR MORE ANSWERS ARE CORRECT</b>
<b>UNSATISFACTORY</b>	<b>MINIMAL</b>	<b>PROFICIENT</b>	<b>EXEMPLARY</b>
Most of the concepts are not clear, remembered and answered by the student	Some of the concepts are clear, remembered and answered by the student	Majority of concepts are clear, remembered and answered by the student.	Most of concepts are clear, remembered and answered by the student.

**RUBRICS FOR ASSIGNMENT**

<b>DEVELOPING</b>	<b>APPROACHING PROFICIENCY</b>	<b>PROFICIENT</b>	<b>ADVANCED</b>
<b>POINTS 0-3.4</b>	<b>POINTS 3.5-5.9</b>	<b>POINTS 6-7.9</b>	<b>POINTS 8 – 10</b>
<b>ONLY UP TO 35% ANSWERS ARE CORRECT</b>	<b>BETWEEN 35 – 50% ANSWERS ARE CORRECT</b>	<b>BETWEEN 60 – 80% ANSWERS ARE CORRECT</b>	<b>80% OR MORE ANSWERS ARE CORRECT</b>
Is not able to even synthesise problem	Is able to synthesise problem	Is able to synthesise problem and envisage applicable excel technique	Is able to synthesise problem and envisage applicable excel technique and provide interpretation of data

**RUBRICS FOR END TERM**

<b>POOR</b>	<b>FAIR</b>	<b>GOOD</b>	<b>EXCELLENT</b>
<b>POINTS 0-3.4</b>	<b>POINTS 3.5-5.9</b>	<b>POINTS 6-7.9</b>	<b>POINTS 8 – 10</b>

<b>ONLY UP TO 35% ANSWERS ARE CORRECT</b>	<b>BETWEEN 35 – 50% ANSWERS ARE CORRECT</b>	<b>BETWEEN 60 – 80% ANSWERS ARE CORRECT.</b>	<b>80% OR MORE ANSWERS ARE CORRECT.</b>
<b>UNSATISFACTORY</b>	<b>MINIMAL</b>	<b>PROFICIENT</b>	<b>EXEMPLARY</b>
Most of the concepts are not clear and student is unable to understand the same.	Many of the concepts are clear and understood by student.	Majority of concepts are clear and understood by student.	Most of concepts are clear and understood by the student.

**INSTITUTE’S POLICY STATEMENTS**

It is the responsibility of every student to be aware of the requirements for this course, and understand the specific details included in this document. It is emphasized that this course requires a significant commitment outside of formal class contact. The learning tasks in this course include classes, required reading and practices, the preparation of answers to set questions, exercises and problems, and self-study. In addition, students may be required to complete an assignment, test or examination.

**LATE SUBMISSION**

Not applicable as student would have to complete and submit assignment in the class.

**PLAGIARISM:**

Plagiarism is looked at as the presentation of the expressed thought or work of another person as though it is one's own without properly acknowledging that person.

Cases of plagiarism will be dealt with according to Plagiarism Policy of the institute. It is advisable that students should read applicable section of Student Handbook for detailed guidelines. It is also advisable that students must not allow other students to copy their work and must take care to safeguard against this happening. In cases of copying, normally all students involved will be penalized equally; an exception will be if the student can demonstrate the work is their own and they took reasonable care to safeguard against copying.