DSCI 3710.004 INET– Summer 2018 – Syllabus

CLASS (DAY/TIME/LOCATION): Blackboard (https://learn.unt.edu/)
INSTRUCTOR: Dr. Hakan Tarakci
OFFICE: BLB 358-C
E-MAIL: hakan.tarakci@unt.edu (preferred mode of contact
OFFICE HRS: Available via e-mail

COURSE WEB SITE(S): https://course.hawkeslearning.com/UNTDBS/ for course material(**a link to this will also be available from within Blackboard**)

REQUIRED SOFTWARE:
Discovering Business Statistics, by *Hawkes Learning Systems* (HLS),

***ISBN 13: 978-1-941552-85-8* (Courseware + eBook*).**

(*Included eBook can only be accessed online through the courseware)

The software access code is **required** to complete the assignments. If you took DSCI 2710/3710 and have an access code **for the above product**, then you can reuse it. If you have an access code for a different product, then you will **have to buy a new code**.

You can do your HLS assignments by accessing HLS over the web at:

https://learn.hawkeslearning.com/Portal

If however you wish to install the software on your personal laptop, then please see the links below, which include a training video link. ***There is unfortunately no installation for MAC computers***.

- **Student Compact or Complete (larger file with audio/video Install for PC, Version 15.0.4**. **(http://fileburst.hawkeslearning.com/v15/dbs-student-setup.exe)** (Compact) **http://fileburst.hawkeslearning.com/v15/dbs-student-setup-full.exe** (Complete) followed by its update at http://fileburst.hawkeslearning.com/v15/v15-cumulative-updates.exe
- HLS training video: http://tv.hawkeslearning.com/Video.htm?PlayerID=2956123671001
- Note: Hawkes Course ID is "**UNTDBS**" for installation

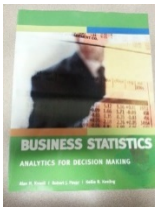
Please see the **Student Getting Started Directions** page at the end of this syllabus. (**@ page # 8**).

RECOMMENDED BOOK (for further reading/comprehension):
Discovering Business Statistics by Nottingham/Hawkes, Hawkes Learning,

ISBN 13: 978-1-941552-69-8 **(Courseware + eBook* + Textbook (HARD COPY)).**

(*Included eBook can only be accessed online through the courseware)

Recommended Reading:



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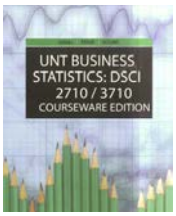

ISBN-10: 0495984949
ISBN-13: 978-0495984948

Optional Books: Any Excel Primer - Most of you had an Excel reference in BCIS 2610 that will suffice.

Course-level Outcomes Upon successful completion of this course, the learner will be able to…	
Outcome 1	Use statistical inference, which includes estimation and hypothesis testing to deduce properties of the underlying distribution related to a business context
Outcome 2	Use statistical model building to provide prescriptive analytics in a business context
Outcome 3	Identify and apply the appropriate statistical tool/methodology to aid in business decision making
Outcome 4	Use various probability distribution charts such as the Gaussian, Students – T, F and Chi-Square.

TEACHING METHOD: (This course is being offered fully online)

1. Students are encouraged to pay attention to commercials and news items in print, as well as audiovisual media to become aware of the wide use of statistics in our daily lives. To better assist students in understanding the use of these methodologies in business, many of the class problems will be presented as simple business cases.
2. Students will observe and actively participate in the working of problems found in the textbook. In addition, students will be required to complete modules in **Hawkes Learning Systems (HLS): Business Statistics**. This process is intended to help students make more efficient use of their time in learning how to solve problems.
3. Students are required to participate in online discussions if any on statistical methodologies applied to non-trivial cases in various areas of business. The use of spreadsheets in analyzing business data will be stressed.
4. Students are required to complete tutorial assignments and computer projects.

EVALUATION:

To demonstrate their ability to use quantitative techniques in business, students will complete the tutorials (**Hawkes Learning Systems: Business Statistics**), analyze real business data for class cases using Excel and answer exam questions based on short data analysis situations. Wherever possible, rather than being purely numerical, problems will be presented in word format. The exams and assigned work reinforce the course objectives by simulating real business problems that require students to communicate.

CAMPUS CLOSING POLICY: In the event of an official campus closing, please check your UNT e-mail account (EagleConnect) or the HLS notice system for instructions about how to turn in various assignments, how the due dates are modified, etc.. Since this is an online course, unless the servers are down, campus closing will not affect us.

GENERAL COMMENTS

1. Doing the assignments is essential for success in this course. In fact, the assignments constitute a large portion of your grade in this course. Students are encouraged to keep up with the homework and meet the submission deadlines.

2. Students should not hesitate to ask questions in class. Usually someone else has the same question, so, by asking in class everyone can benefit from the question.

3. Students have the final responsibility for seeing that they properly withdraw before the scheduled last drop day, in case they wish to withdraw from/ drop the course. A student who stops attending class should execute the drop procedure since failure to do so will result in a grade of "F" which cannot be changed.

4. Students are requested not to phone the ITDS department for their final grade in the course. Final grades are only available electronically.

DSCI 3710 COURSE- SPECIFIC POLICIES:

1. **Homework:** Homework is assigned and should be completed when due. While only the HLS modules (tutorials), WEBTESTS and Quizzes on Excel cases are graded, all reading material is testable, even if it is not emphasized in the online lecture.
2. **Excel Cases:** Projects involving the use of **Excel** to analyze business data are assigned. These are an important part of the course grade that is graded via a short online **Quiz** that is available in the HLS software using WEBTEST on the dates they are due.

3. **Tutorial Exercises:** Tutorial exercises using the **Hawkes Learning Systems: Business Statistics (HLS**) are assigned. The due dates for the tutorials using **HLS** software are assigned in this syllabus. These form a significant part of the course grade and **must be registered onto the HLS Web database by the due date** to receive full credit. On completion of a module in a COB lab, or at home, you should **save the HLS certification code to your disk**. **If you are connected to the internet** the module will register automatically **but always double check that you have received credit by going to your progress report**. If there is any problem, exit HLS and then go to your course HLS Web site at https://course.hawkeslearning.com/untdbs/default.asp.

   Late tutorial submissions receive only 50% credit, provided they are registered by **the last class day before the final**. No credit is awarded for any tutorial exercise completed after the last class day before the final. ***To get your authorization code for using the HLS software, if you are a new purchaser of the software, you will need to visit HLS web site. PLEASE SEE PAGE 11 of this syllabus for detailed instructions. If you previously purchased the software (DISCOVERING BUSINESS STATISTICS) and lost your code you should either visit*** http://www.hawkeslearning.com/Support/GetYourAccessCode/AccessCodeLookup.htm ***or send an E-mail to HLS customer service at codes@hawkeslearning.com. It would be best to send your name as you had registered with HLS originally, the name of the software, the prior term instructor's name, the term and year of the purchase, and the course for which you made the purchase (DSCI2710 or DSCI3710).*** See page 11 of this syllabus for a full set of HLS instructions. You can also download (save) a comprehensive set of instructions directly from the HLS web site by going to: *http://www.hawkeslearning.com/Support/InstallationInstructions.htm*. In addition, there is a more detailed or full set of student directions that walk through the product completely on that page.

4. **Exams (DATES ARE DISPLAYED ON PAGE 5):** There is one online mid-term exam worth 200 points and a comprehensive online final worth 200 points. **Both exams will be held in Blackbaord.** The **department final exam is scheduled as listed at the end of this syllabus. Please check for the time of your exam later.** No make-up exams are given, however, if a student misses the first exam (with an appropriate University approved excuse, as mentioned above) the final **may** be used to substitute for the missed exam (as well as for the final exam). For each exam you will be allowed to use formula sheets, notes, textbooks, any calculator, and Tables. Each of the **two (50 points each) long HLS quizzes** is a summary test of the modules completed prior to them. The quizzes can be done **only** on certification of these component/ prerequisite modules. Late registration of the modules may disable you from the HLS Quizzes. Any issues related to on time completion or credit for the modules and online quizzes should be resolved with the instructor within one week following their respective due dates. Such issues cannot be considered weeks later and especially not during compilation of the final grades, at the end of the semester.
   Taking Online Excel (short) and HLS (long) Quizzes: To take a quiz in HLS open the software as usual and select Web Test at the bottom of the page. This will open the Web Test area. Select Take Test on the left side of the page. When a new window opens, select Assigned Test and OK. From the Select a Test Menu you can select the appropriate Excel Quiz, or Online HLS Quiz. These Quizzes will not open until the dates as posted in the progress report or as announced in class. Once you select the Begin Test button the clock is running for the assigned time allotted for the Quiz. If you log off before completing the Quiz/Exam, you will receive either a -0- or partial credit for what portion you did complete. Therefore get everything you need BEFORE opening the Quiz.

5. **Grading:** The 16 HLS modules are worth a total of 80 points (@ 5 points each); the 4 short Excel case quizzes are worth 20 points (@ 5 points each); the 2 long HLS quizzes are worth 100 points (@ 50 pts. each); the online mid-term exam is worth 200 points, and the comprehensive online final is worth 200 points.

Point Allocation:

Mid-term Exam (JULY 26, 2018)	200 points
HLS Tutorials and short Excel Quizzes (16*5 pts + 4*5pts)	100 points
Long HLS quizzes (2 * 50 pts)	100 points
Final Exam (AUGUST 10, 2018) 200	200 points
TOTAL:	600 points

Letter Grades:

540+ = A
480+ = B
420+ = C
360+ = D
Below 360 = F

6. **Statistics Lab.** This is available for students seeking additional help. Hours and venue will be announced online and posted to the course website. The purpose of the lab is to assist students to overcome difficulties they may encounter in attempting statistics problems. It is not meant to be an extensive tutoring service.

DEPARTMENT, COLLEGE, and OTHER POLICIES

1. To be eligible for enrollment in upper level business courses, students must have satisfied **all** of the following requirements:
   a) A 2.70 grade point average
   b) Completion of 45 hours of the pre-business course work,
   c) Completion of **DSCI 2710** or equivalent a grade of C or better. **DSCI 2710** requires **MATH 1100 and 1190** as well **BCIS 2610**. In addition, students are required to have completed: Accounting 2020 with grade "C" or better and Economics1100.

   If you are a business major (including business undecided or pre-accounting majors) enrolled in upper level business courses and do not meet these requirements, please drop the upper level courses immediately in order to receive a refund of your tuition. If you choose not to drop, the Dean's office will administratively cancel your enrollment in those courses. In that event, you will **not** receive a tuition refund.
2. If you wish to register a complaint, you should first discuss your complaint with your instructor. If you wish to carry it further, contact the ITDS Department Chair (Dr. Leon Kappelman, Leon.Kappelman@unt.edu), but **only after discussing it with your instructor**.

3. As a general rule, the course format requires **no make up exam** be given. The grade of "I" is not given except for rare and very unusual emergencies, as per University guidelines.
4. You are required to take all exams, unless a written medical excuse is provided. In that case, you should discuss the alternative arrangements with your instructor.
5. Academic integrity: This course adheres to the UNT policy on academic integrity. The policy can be found at http://facultysuccess.unt.edu/academic-integrity . If you engage in academic dishonesty you will receive a failing grade on the test or assignment, or a failing grade in the course. In addition, the case may be referred to the Dean of Students for appropriate disciplinary action.

6. Students with Disabilities: The College of Business Administration complies with the **Americans with Disabilities Act** in making reasonable accommodations for qualified students with disability. If you have an established disability as defined in the "Act" and would like to request accommodation, please see your instructor as soon as possible. Office hours and phone number are shown at the top of this syllabus.
7. Dates of drop deadlines, final exams, etc., are published in the university catalog and the schedule of classes. Please be sure you keep informed about these dates (and any change thereof).
8. **Grounds for Dismissal from the Course**

A student can be dismissed from the course with a grade of "WF" for reasons of unsatisfactory progress. Some grounds for unsatisfactory progress are as follows:

i. The student has more than 3 un-excused assignment returns (such as Excel or HLS, on their final due dates) / absences.
ii. The student misses (providing no reason)/ or is caught cheating on an examination.

If a student is suspected of unsatisfactory progress, the instructor will first issue a warning (oral) to the student. Upon issuance of the warning, the student has three (3) actual days to provide evidence supportive of the student's position. For any missed exam the following evidence will be accepted as tenable excuse:

* Written and valid doctor's excuse for illness
* Valid UNT sponsored event (must provide signed reference from head of sponsoring department.)

If the student provides satisfactory evidence, the instructor will reinstate him or her into the class.

If a student misses the final exam, he or she must provide the information stipulated above. If the excuse is acceptable, the instructor will submit an "I" for the final grade and the student must make up the exam within the first two (2) weeks of the following term. **This is the only circumstance in which an "I" grade will be awarded. If you think you will not be able to complete the class satisfactorily, please drop the course. An "I" grade cannot be used to substitute your poor performance in class.**

If a student is caught cheating, he or she will be immediately removed from the class with a "WF" grade. To be reinstated, the student must provide substantial evidence to the contrary in a hearing held in the Dean of Students Office, University of North Texas.

The next page is a tentative outline for the semester. It is meant to be a guide and several items are subject to change. Exams and quizzes may be moved to better accommodate any changes in class pace. Certain topics may be stressed more or less than indicated.

Assignment Due dates: Online registration due dates for the HLS: Business Statistics (HLS) Modules are shown in your HLS Progress Report. All modules are due by 11:59 pm of the slated due date.

(16 x 5 pts. = 80 pts)

No.	Module #	Module Name	Due Date
1	10.4a	Hyp. test for μ (Z-value)	Due by midnight: July 23, 2018
2	10.4b	Hyp. test for μ (t-value)	
3	10.4c	Hyp. test for μ (p-value)	
4	11.1	Comparing two means (sigma known)	
5	11.2	Comparing two means (sigma unknown)	
6	11.3	Comparing means (dependent samples)	
7	12.2-12.4	ANOVA	
8	10.7a	Hyp. test for proportions (Z-value)	
HLS Quiz #1 (covering modules 1-8, certification is required to take the quiz)			
9	10.7b	Hypothesis test for proportions (p-value)	Due by midnight: July 25, 2018
10	11.4	Comparing 2 proportions (large independent samples)	
11	15.3	Chi-sq. test for association	Due by midnight: August 8, 2018
12	4.8	Scatter plots and Correlation	
13	13.1-13.5	Fit linear model	
14	13.8	Regression analysis I	
15	14.5a	Multiple Regression	
16	14.5b	ANOVA regression	
HLS Quiz #2 (covering modules 9-16, certification is required to take the quiz)			

Module registration is due by (11:59pm) of due date as "logged-in" on the WEB registration system. After completing a module in a COB lab, campus lab or done at home you should save the HLS certification code to your disk. You cannot enter certification codes by typing in the code.

Late certifications are accepted, but at 50 % penalty (for a max. of 2.5 pts.). If you certify but are unable to register, send an Email with your certification code and describing the problem to your instructor within 24 hours of the system error. Any issue related to tardy/ late submission of modules are to be taken care of within one week of their respective due dates. Please understand that such late certifications may result in your losing full score on the HLS Quizzes. No late modules are taken after **the last class day before the final**.

Quizzes: Analysis results are required for completion of online quiz on each Excel case. Your grade on the Excel case is based on the quiz: 4 x 5 pts. = 20 pts.

No	Topic	Due Date
Excel CASE 1	**Comparing population Means (Multicultural)**	Check your HLS Progress Report for Due Dates
Excel CASE 2	**1 way ANOVA (Marketing/ Management)**	
Excel CASE 3	**Chi-Square test (Marketing)**	
Excel CASE 4	**Multiple Regression (Real-Estate)**	

Excel case details are available through the HLS portal when you login under "Course Materials"

Each excel case is evaluated using a short quiz based on it, given using WEBTEST on the due date. The quiz contains 5 questions (5 points) and students need to use their own analysis printout to answer the questions. Make-up quizzes are only given if arranged with your instructor. **Late Excel cases are hand-graded with a maximum of 50% credit, provided they are handed in on or before the next class period and after that next class they receive no credit.** The maximum of 2.5 points is obtainable providing the entire case analysis is complete and correct.

TO GET THE ACCESS CODE FOR YOUR COURSE:

1. Go to http://www.hawkeslearning.com/Support/GetYourAccessCode.htm. Phone HLS at 843-571-2825 for help
2. There will be three options on the above link and each option is explained clearly.
3. Choose the appropriate option that is applicable to you (for example "Purchase an access code")
4. If you are purchasing the access code anew, you will be taken to a secure site, where you will be asked to enter your credit card information. Please note that the address information MUST match the billing address of the credit card.
5. After your credit card information has been verified, you will be taken to a page where you will request an Access Code by entering your name, school, and email address.

Upon submitting the Access Code request, your Access Code will be emailed to you as well as displayed on the screen.

ACCESSING THE LESSONS ONLINE

You can do your HLS assignments by accessing HLS over the web at: **https://learn.hawkeslearning.com/Portal**

TO DOWNLOAD and INSTALL THE HLS SOFTWARE AT HOME: use the update option instead if you have a version from a prior term(***direct links for download are on page 1 of this syllabus. You can use those or follow the instructions below***)

1. Go to the HLS site and select the "Students" -> "Download the Software" link or go directly to http://www.hawkeslearning.com/Support/Downloads.htm
2. Select "**Discovering Business Statistics (textbook by Nottingham, Hawkes)**" product from the drop down list.
3. Click on the "**Student Complete Install for PC** " download option. (**Release date: 07/26/2017, Version: 15.0.4);**
4. When prompted, save the Installer program to your Desktop folder. **Download an install any update files too.**
5. After the file is saved to your desktop, double click on it to begin the installation. Please follow the prompts.
6. When prompted for the **Hawkes Course ID** enter **UNTDBS** in the box provided.
   -**If you do not have internet access**, select "No, I will not be accessing an online progress report from this computer."

TO ENTER THE SOFTWARE AND SAVE YOUR ACCESS CODE:

1. Double-click on the purple diamond icon on your Desktop (or go to Start, Programs, Hawkes Learning Systems).
2. Enter your access code when prompted. You may type it, paste it, or load it from a disk (if you saved it from e-mail) by clicking the "F1-Load From Disk" option and browsing to the path where you saved it. If you type or paste your access code, you will be prompted to save it. Save your access code to any removable media (such as a flash drive) or another option to avoid typing it each time.

TO ENROLL IN YOUR INSTRUCTOR'S GRADEBOOK:

1. **If you have internet access** and have entered your **Hawkes Course ID** (which is **UNTDBS**), you will automatically be asked to enroll in your instructor's gradebook the first time that you log in to the software. Choose your instructor's name and the correct section from the pull-down menus.
2. **If you do not have internet access** on the computer where the software is installed, you will need to enroll in your instructor's gradebook by going to www.hawkeslearning.com/UNTDBS . After entering your Access Code, you will be prompted to choose your instructor's name and the correct section from the pull-down menus.

TO CERTIFY (DO YOUR ASSIGNMENT IN THE SOFTWARE):

1. The **Certify** option is where you will complete your assignment.
2. After certifying, you will be given a certification code (this verifies that you completed your assignment). It is recommended that you print and/or save your certification code.
3. **a. If you have internet access**, you should receive a message that says your certificate has been submitted in your instructor's gradebook. You are now done with that assignment! If you do not receive this message, follow the directions under "**b.**".
   b. If you do not have internet access, you will need to save the certification code file to a disk and upload the saved file from your disk on the internet from campus to get credit for your assignment in your instructor's gradebook. To do this, - go to https://course.hawkeslearning.com/UNTDBS/Default.asp and **log in using your access code**
   - click the Submit Certificate(s) link
   - select the Lesson Name from the drop down list. Load your certification code from a disk and click OK. Your certification code is now submitted!
   - you need to perform these steps after you Certify to get credit for each of your assignments

*** Be sure you submit your Certification Code ON or BEFORE the due date to get full credit for the assignment.**

Student Getting Started Directions – see `www.hawkeslearning.com/Students.htm` **for help**

Below is a tentative outline for the semester. It is meant to be a guide and several items are subject to change. Exams and quizzes may be moved to better accommodate any changes in class pace. Certain topics may be stressed more or less than indicated.

DSCI 3710 – Topics
(HLS# means **HLS: Business Statistics tutorials, HT** means **Hypothesis Testing.)**

For important add/drop etc. dates see http://registrar.unt.edu/registration/summer-registration-guide

Course Outline

Module	Learning Objectives	Learning Materials	Activities/Interactions	Assessments
Week One	Upon successful completion of this module, the learner will be able to: • Conduct a test of hypothesis for a population mean with a large sample size	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252828001&prod=dbs o Hypothesis testing for means (Z-value)	Practice and Certification Modules of : 1. HLS1: 10.4a HT means (Z-value) 2. HLS2: 10.4b HT mean (t-value)	• 50 point Web Quiz 1 • Exam 1

	• Conduct a test of hypothesis for a population mean with a small sample size/population standard deviation unknown • Describe the meaning and usage of p-values in hypothesis testing for both one and two-tailed tests of hypothesis • Construct confidence intervals around mean values. • Describe the difference between practical and statistical significance • Describe the relationship between confidence intervals and hypothesis testing	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729245475001&prod=dbs o Hypothesis testing for means (t-value) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252826001&prod=dbs o Hypothesis testing for means (p-value) • Textbook – Sections 10.4, 10.5 & 10.6	3. HLS3: 10.4c HT means (p-value)	
Week Two	Upon successful completion of this module, the learner will be able to: • Conduct tests of hypothesis for two population means when samples are large and independent. • Conduct tests of hypothesis for two population means when samples are small and independent and the population variance are assumed unequal • Conduct tests of hypothesis for two population means when samples are small and independent and the population variance are assumed equal	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729245498001&prod=dbs o Hypothesis testing for 2 means (σ - known) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252848001&prod=dbs o Hypothesis testing for 2 means (σ -unknown)	Practice and Certification Modules of : 1. HLS4:11.1 HT 2 means (σ - known) 2. HLS5: 11.2 HT 2 means (σ – unknown) 3. HLS6: 11.3 Compare μ's (dep. n) 4. HLS7: 12.2-12.4 ANOVA	• 50 point Web Quiz 1 • Exam 1 • CASE 1: Comparing population Means - Excel Quiz 1 (Multicultural)

	• Conduct tests of hypothesis for two population means when samples are small and dependent • Conduct tests of hypothesis to compare multiple population means (Analysis of Variance)	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729245497001&prod=dbs o Comparing Means (dependent samples) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252853001&prod=dbs o Analysis of Variance (ANOVA) • Textbook – Sections 11.1, 11.2, 11.3, 12.1, 12.2, 12.3 & 12.4		
Week Three	Upon successful completion of this module, the learner will be able to: • Conduct tests of hypothesis for a single population proportion with large samples • Conduct tests of hypothesis for comparing two population proportions with large samples • Conduct a Chi-Square test for independence/homogeneity for categorical data using contingency tables • Identify critical values from the chi-square chart and use it to estimate p-values for the test of independence/homogeneity	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252823001&prod=dbs o Hypothesis testing for single proportion (Z – value) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252821001&prod=dbs o Hypothesis testing for single proportion (p – value) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252847001&prod=dbs	Practice and Certification Modules of : 1. HLS 8: 10.7a HT proportions (Z – value) 2. HLS 9: 10.7b HT prop. (p-value) 3. HLS 10:11.4 HT 2 proportions 4. HLS 11: 15.3 Chi-sq. test for association	• 50 point Web Quiz • Exam 1 • CASE 2: One-way ANOVA Excel Quiz 2 (Marketing / Management) • CASE 3: Chi-Square test - Excel Quiz 3 (Marketing)

		○ Hypothesis testing for two proportions • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729263425001&prod=dbs ○ Chi-square test for association • Textbook – Sections 10.7, 11.4, 15.1, 15.3		
Week Four	Upon successful completion of this module, the learner will be able to: • Understand Bi-variate data & correlation • Calculate simple metrics of linear association between two variables • Create simple linear regression models • Describe such model assumptions and the meaning of the coefficient of determination and other important metrics • Conduct confidence intervals for the slope of the regression line • Describe correlation v/s causation. • Describe the importance of residuals and perform simple residual analysis • Identify metrics for residual analysis and outlying observation checks	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729150297001&prod=dbs ○ Scatter Plots and Correlation • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729245512001&prod=dbs ○ Fitting a Linear Model (Simple Linear Regression) • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252866001&prod=dbs ○ Regression Anaylsis I (Simple Linear Regression) • Textbook – Sections 4.8, 13.1,13.2,13.3,13.4,13.5,13.6,13.7,13.8	Practice and Certification Modules of : 1. HLS12: 4.8 Scatter Plots & Corr 2. HLS13: 13.1-13.5 Fit linear model 3. HLS14: 13.8 Regression I	• 50 point Web Quiz 2 • Exam 2

Week Five	Upon successful completion of this module, the learner will be able to: • Construct Multiple regression models • Interpret the slope in Mutliple regression models • Describe the importance of the Global F-test and its difference from individual t-tests • Describe multicollinearity in the context of Multiple regeression • Conduct Multiple regression for categorical data using Dummy variables • Identify metrics for residual analysis and outlying observation checks in the context of Multiple regression	• http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252873001&prod=dbs o Multiple Regression • http://tv.hawkeslearning.com/VideoPlayerSingle.htm?PlayerID=1729252872001&prod=dbs o ANOVA Regression • Textbook – Sections 14.1,14.2,14.3,14.4,14.5,14.6,14.7,14.8	Practice and Certification Modules of : 1. HLS 15: 14.5a Mult. regression 2. HLS 16: 14.5b ANOVA regression	• 50 point Web Quiz 2 • Exam 2 • CASE 4: Multiple Regression - Excel Quiz 4 (Real-Estate)