Course Outline

Business 307

Statistics II

45.0 Hours
3.0 Credits

Prepared by ____________________________ Date: August 23, 2013

Brian Paul, Instructor

Approved by ____________________________ Date: ____________

Dave McHardy, Acting Dean, Applied Science and Management
YUKON COLLEGE
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This course outline was prepared by Brian Paul on August 23, 2013.

Yukon College
500 College Drive
Post Office Box 2799
Whitehorse, Yukon Y1A 5K4
Statistics II

Instructor: Brian Paul, M.Sc., MBA

Office Location: Room #A 2412 - Ayamdigut Campus

Office Hours:
09:00 - 12:00, Monday  
13:00 - 14:30, Tuesday and Thursday  
09:00 - 12:00 & 13:00 - 16:00, Wednesday  
13:00 - 16:00, Friday  
(or by appointment)

Telephone Numbers:
668-8756 (Ayamdigut)  
667-6763 (Home)  
668-8890 (FAX - Ayamdigut)

E-Mail: bpaul@yukoncollege.yk.ca (Ayamdigut)  
bpaul@northwestel.net (Home)

Course Length: 45.0 hours (1.5 hrs/day; 2 days/week; 15 weeks)

Course Days: Tue / Thur  
Course Time: 15:30 - 17:00

Class Room #: A 2204  
Lab Room #: A 2301 / A 2408  
A 2702

Course Description:

Business 307 is a continuation of the introductory statistics course offered in the first year of the Business Administration program at Yukon College. Students successfully completing both Business 111 and Business 307 will have a solid grounding in basic business statistics.

Perhaps more so than in Business 111, the emphasis in Business 307 will be on the application of statistical models to "real world" problems of uncertainty and variability. The instructor will continue to concentrate on building a sound knowledge of the use (and potential misuse) of statistical methods to provide students with a basis for future administrative problem solving and analysis. As in Business 111, a certain amount of mathematical development will
be involved, but we will look mainly at how the basic concepts are applied, rather than spending
time on theorems and formulas.

**Business 307** will pick up where **Business 111** left off - with statistical inference. The instructor
will cover analysis of variance techniques, chi-square analysis, a number of non-parametric
techniques and linear regression and correlation during the first seven weeks of the course. A
considerable amount of classroom time will then be spent on multiple regression and multiple
regression models.

Towards the end of the course, the instructor will move on to cover some statistical applications
specific to business and economics, namely time-series analysis and statistical quality control.

Just prior to the final examination, the instructor will re-visit the probability concepts covered
very early on in **Business 111** and show how these concepts can be applied to decision making
in different business situations.

**Course Goals / Learning Objectives:**

1) As in **Business 111**, one of the objectives of this course is to familiarize students with a
number of statistical techniques applicable to business problem solving

2) A second objective is to familiarize students with the analytical power of computer-based
statistical packages. Students should be reasonably adept with **MINITAB** and/or **EXCEL**
upon completion of this course.

3) A third objective is to ensure that students become intelligent consumers of statistical data,
particularly as this relates to the output from computer-based statistical packages.

4) A final objective is to acquaint students with the methodology of applied research, in the
hope that students - at some point - will be able to apply this methodology in the workplace.

**Course Prerequisites:**

Students will normally have completed **Business 111** - Statistics I - prior to registering in this
course.

The prerequisite for this course - **Business 111** or a similar introductory statistics course - may
be waived by the instructor under certain circumstances.

**Course Format:**

The course will be developed around selected chapters in **Statistics for Management and
Economics - Ninth Edition**, by Gerald Keller. However, the instructor will support both the
eighth and ninth editions of the text.

**2013 08 23 / BUS 307-001 / STATISTICS II**
The instructor will proceed on the assumption that students have kept abreast of the assignment materials - some students may wish to read ahead in the text. An assignment schedule will be provided by the instructor during the first class. As the instructor will probably not cover all the material in the assigned chapters, the emphasis for examination purposes will be on the material covered during the classroom sessions.

The course will be delivered using a combined format of lectures and sample problems worked out in class. The lectures will follow the textbook for the most part, but will be augmented with a significant number of handouts.

You will be asked to apply the statistics and probability theory covered in the classroom to related problem exercises and assignments.

Course Requirements:

How To Perform Well In This Course (!)

A good understanding of the basic concepts of probability and statistics is the key success factor in this course. It is absolutely essential that you keep abreast of the assignments and general course work. The concepts covered in the course are cumulative and missing classes will put you out of sync in ways that won’t be apparent until term test or examination time. If you must miss a class, it’s a good idea to let the instructor know ahead of time so that arrangements can be made to cover the material outside of class.

Assignments

The main requirement for assignments is that they be submitted on the due date. Late assignments will have ten percent (10%) deducted for every day they are late. Unless prior arrangements are made with the instructor, or the instructor indicates otherwise, all assignments will be wordprocessed.

Examinations

Rewrites of the final examination may be allowed under certain conditions. If a student does poorly on the final examination, such that he or she fails the course, the instructor may allow the student to rewrite the final examination. Under no circumstances will a student be allowed to rewrite a final examination if that student has failed the term work component of the course.

Plagiarism

Plagiarism is a serious academic offence. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may result in dismissal from a program of study or the college.
Plagiarism involves presenting the words of someone else as you own. Plagiarism can be the deliberate use of a whole piece of another person’s writing, but more frequently it occurs when students fail to acknowledge and to document sources from which they have taken material.

Whenever the words, research, or ideas of others are directly quoted or paraphrased they must be documented according to standard procedures (APA or MLA). Re-submitting a paper for which you have previously received credit is also an academic offence.

**Students with Disabilities or Chronic Conditions**

Reasonable accommodation is available for students with a documented disability or chronic condition. It is the student’s responsibility to seek out accommodation. If a student has a disability or chronic condition and needs accommodation to fully participate in this course, he or she should contact the Learning Assistance Centre at 668-8785 or lassist@yukoncollege.yk.ca.

**Evaluation:**

A final grade for this course will be assigned on the following basis:

**Assignments / Cases**  
50%

There will be five assignments, each worth 10%.

**Term Test**  
20%

There will be one term test in this course, worth 20%. The term test has been tentatively scheduled for October 31, 2013.

**Final Examination**  
30%

The final examination has been tentatively scheduled for December 16, 2013.

Total: 100%

**Required Textbook:**


**Software / Supplementary Textbooks / Internet Resources:**

Students will be able to access the *Minitab Release 16* in all of the College’s computer labs.
Rental versions of *Minitab Release 16* can be downloaded from

http://www.onthehub.com/minitab/

for approximately $30. Having a personal copy of *MINITAB* will allow you the luxury of doing your assignments at home, rather than in the computer lab. A handout describing the download procedure for Yukon College students will be distributed during the first class. For further information on the download, please refer to the *MINITAB* home page at

http://www.minitab.com/

*Data Analysis Plus* has been installed on the student server and this *EXCEL* macro will show up in the Add-Ins tab when *Microsoft EXCEL 2010* is in use in the College computer labs. If you need a copy of *Data Analysis Plus 9.0* for your personal computer, please contact the instructor.

Supplementary textbooks are available in the Yukon College library, or from the instructor. If you need a reference on a specific topic, the instructor should be able to steer you in the right direction.

A course web page has been set up in MyYC. The instructor anticipates that the course web page will serve mainly as a repository for the course materials handed out in class and the data files you’ll need to complete the five assignments. Content will be added to the web page as course progresses.

Students can - apparently - access some essential textbook resources by going to the following internet address:

https://login.cengagebrain.com/cb/login.htm

You will need to create an account using the access code that came with your textbook. The student solutions manual for the ninth edition of the text appears to be one of the essential textbook resources. The instructor has a copy of the full solutions manual, but not the abbreviated version that is made available to students.

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**Required Supplies:**

None

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**Proposed Syllabus:**

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Text: Chapters</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>09/05/13</td>
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<td>Introduction to the Course</td>
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2013 08 23 / BUS 307-001 / STATISTICS II
<table>
<thead>
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<th>Class</th>
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<th>Topic</th>
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<tbody>
<tr>
<td></td>
<td>09/06/13</td>
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<td>Last Day To Register In Fall Semester Courses</td>
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<tr>
<td>2</td>
<td>09/10/13</td>
<td>11</td>
<td>Hypothesis Testing - A Review</td>
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<tr>
<td>3</td>
<td>09/12/13</td>
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<td>MINITAB / DATA ANALYSIS PLUS - A Review (^1)</td>
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<tr>
<td>4</td>
<td>09/17/13</td>
<td>14</td>
<td>Analysis of Variance</td>
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<td>1st Assignment Handed Out</td>
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<tr>
<td>5</td>
<td>09/19/13</td>
<td>14</td>
<td>Analysis of Variance</td>
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<tr>
<td>6</td>
<td>09/24/13</td>
<td>14</td>
<td>Analysis of Variance</td>
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<tr>
<td>7</td>
<td>09/26/13</td>
<td>15</td>
<td>Chi-Square Tests</td>
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<td>8</td>
<td>10/01/13</td>
<td>15</td>
<td>Chi-Square Tests</td>
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<td>9</td>
<td>10/03/13</td>
<td>19</td>
<td>Non-Parametric Tests</td>
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<td>19</td>
<td>Non-Parametric Tests</td>
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<td>19</td>
<td>Non-Parametric Tests</td>
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<td>10/14/13</td>
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<td>Thanksgiving Day Holiday</td>
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<td>12</td>
<td>10/15/13</td>
<td>16</td>
<td>Linear Regression and Correlation</td>
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<td>10/17/13</td>
<td>16</td>
<td>Linear Regression and Correlation</td>
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<td>10/22/13</td>
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<td>Multiple Regression</td>
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<td>10/31/13</td>
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<td>11/05/13</td>
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<td>11/07/13</td>
<td>17/18</td>
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<td>11/11/13</td>
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<td>11/12/13</td>
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<td>Time Series Analysis &amp; Forecasting</td>
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<td>11/13/13</td>
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<td>Last Day To Withdraw From Fall Semester Courses Without Academic Penalty (College)[^1]</td>
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<tr>
<td>21</td>
<td>11/14/13</td>
<td>20</td>
<td>Time Series Analysis &amp; Forecasting</td>
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<td>5th Assignment Handed Out</td>
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<tr>
<td>22</td>
<td>11/19/13</td>
<td>21</td>
<td>Statistical Quality Control</td>
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<td></td>
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<tr>
<td>23</td>
<td>11/21/13</td>
<td>21</td>
<td>Statistical Quality Control</td>
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<tr>
<td>24</td>
<td>11/26/13</td>
<td>22</td>
<td>Decision Analysis</td>
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<tr>
<td>25</td>
<td>11/28/13</td>
<td>22</td>
<td>Decision Analysis</td>
</tr>
<tr>
<td>26</td>
<td>12/03/13</td>
<td></td>
<td>Review Session I</td>
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<tr>
<td>27</td>
<td>12/05/13</td>
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<td>Review Session II</td>
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<td>12/16/13</td>
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<td>Final Examination (To be Confirmed)</td>
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**Note:**

[^1]: The classes on September 12, November 5 and November 7 will be held in computer lab A 2408 (and these classes may run to two hours in length).