



CMS0022: Informatics in Application - Spring 2018

Cao Tien Dung, PhD

Course introduction



CMS0022 will provide...

- Intro some tools for document management (Word, Docear)
- Overview of database
- Basic data processing with Excel
- Data analysis in Excel (ToolPak)
 - Histogram, Descriptive statistics, ANOVA, F-Test, T-Test, Moving average, Correlation, Regression

CMS0022 will provide...

- Basic of R language
- Data analysis in R
 - Descriptive statistics
 - Statistic distribution functions
 - F-Test, T-Test
 - ANOVA – Analysis of Variance
 - Linear regression, logistic regression
 - ...



Prerequisites

- Have knowledge on statistics and probability (BIS1013)
- Passed CMS0012 – Intro. to informatics

Admin

- Lecturers

- Dr Cao Tien Dung (weeks: 1st – 9th)

- Email: dung.cao@ttu.edu.vn

- Office hours

- Tue 8AM-12PM

- Fri 13PM-16:30PM

- Dr Tran Duy Hien (weeks: 10th – 15th)

- Email: hien.tran@ttu.edu.vn

- Office hours

- Tue & Thu 13:30PM – 15PM

- Fri: 13PM – 16:30PM



Structure

- 1 lecture/week
 - see syllabus for more detail on lectures and labs
- Group activities in class
- Home works
- 1 mid-term exam
- 1 final exam



Textbook

- Microsoft Excel Data Analysis and Business Modeling (5thEd), Wayne Winston, Microsoft, 2016
- Data analysis in Excel (<http://www.excel-easy.com/data-analysis.html>)
- Data Analysis with R, Tony Fischetti, PACKT, 2015



Assessment

- Attendance: 10%
 - Group activities in class: 20%
 - Homework: 20%
 - Mid-term exam: 20%
 - Final exam: 30%
-
- Scale: $A \geq 90$, $B \geq 80$, $C \geq 70$, $D \geq 60$,
 $F < 60$



Policies

- Come class ON TIME
- Keep mobile off/silent in class
- Encouraged to collaborate with others in lab sessions
- Exams: NO collaboration



Question & Answer

Why a scientific format?

- Very different from writing in the humanities -> **Rigid structure**
- **Most journal styles have following sections**
 - Title, Authors and Affiliation
 - Abstract
 - Introduction
 - Materials & Methods
 - Results
 - Discussion
 - Acknowledgements
 - References

Experimental process mapping

Experimental process	Section of paper
What did we do in a nutshell?	Abstract
What is the problem?	Introduction
How did we solve the problem?	Materials & Methods
What did we find out?	Results
What does it means?	Discussion
Who help us find out?	Acknowledgement (optional)
Work responsibility	Author contributions (optional)
Whose work did we refer to?	References
Extra information	Appendices (optional)



Reference

- According to journal format, these are several citation styles

Anthropology - use [AAA](#)

Art History - use [Chicago](#) or [Turabian](#)

Arts Management - use [Chicago](#)

Biology - use [CSE](#)

Business - use [APA](#), [Chicago](#) or [Harvard](#)

Chemistry - use [ACS](#)

Communications - use [MLA](#)

Computing Science - use [Chicago](#)

Criminology - use [APA](#) or [Chicago](#)

Education - use [APA](#)

History - use [Chicago](#) or [Turabian](#)

International Studies - use [APA](#), [APSA](#), [Chicago](#), or [ISA](#)

Journalism - use [AP](#) or [APA](#)

Law & Legal Studies - use [Bluebook](#), [Maroonbook](#) or [ALWD](#)

Linguistics - use [APA](#), [MLA](#) or [LSA](#)

Literature - use [MLA](#)

Mathematics - use [AMS](#)

Medicine - use [AMA](#) or [NLM](#)

Music - use [Turabian](#) or [Chicago](#)

Philosophy - use [MLA](#) or [Chicago](#)

Physics - use [AIP](#)

Political Science - [APSA](#)

Psychology - use [APA](#)

Religion - use [MLA](#) or [Chicago](#)

Sociology - use [ASA](#)

Theater - use [MLA](#) or [Chicago](#)

[AMA: http://library.nymc.edu/informatics/amastyle.cfm](http://library.nymc.edu/informatics/amastyle.cfm)



Reference examples

AMA style:

In text¹⁻³

References:

1. Hu P, Reuben DB. Effects of managed care on the length of time that elderly patients spend with physicians during ambulatory visits. *Med Care*. 2002;40(7):606-613.
2. ...

APA style:

In text:

- Research by Wegener and Petty (1994) supports... OR (Wegener & Petty, 1994)
- More than 2 authors: Harris et al. (2001) argued... OR (Harris et al., 2001)

References:

Wegener, D. T., & Petty, R. E. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality and Social Psychology*, 66, 1034-1048.

More Chicago style: http://www.chicagomanualofstyle.org/tools_citationguide.html

Tools for reference management

- EndNote
- Microsoft Word
- Docear (<http://www.docear.org>)
 - add-on for Word
- Many open source tools...