



Virtual Info Day for Undergraduate Admissions 2020

# BSSc in Data Science and Policy Studies (DSPS)

JUPAS Code: 4893

## Admission Talk

**Prof. Wilson Wong**

Programme Director, Data Science and Policy Studies

**Dr. Chan Wai Yin**

Lecturer, Data Science and Policy Studies

**Dr. Ho Chi Pui**

Lecturer, Data Science and Policy Studies

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**DSPS**

=

**Data  
Science**

×

**Social Science &  
Policy Studies**

01

**Data Science**



**Interdisciplinary field**  
that uses scientific and statistical methods,  
processes, algorithms, and systems, including  
big data and advanced computer technologies  
to generate knowledge and insights from data

02

**Social Science**



**Interdisciplinary field**  
of study which designs and examines  
public policy for formulating solutions  
and strategies to resolve public problems



# Potential Students



Interested in **BOTH**  
**Policy Studies &  
Data Science**

**Data-driven** and  
evidence-based  
policies

Broad and transferable skills  
to meet **job market demands**



Ask big questions on our  
**social problems**

Transform **knowledge  
and technologies** into  
solutions and initiatives

Aspire to make **impactful  
changes** in society

# Programme Curriculum



	Units
Major Required Courses (e.g. Foundation of Data Science, Data Science and Public Policy)	27
Resident Study Overseas	9
Internship	3
Capstone Courses	6
Major Elective Courses (e.g. Social Science Disciplinary Courses OR Selected Technology & Statistics Courses offered by Faculty of Science and Faculty of Engineering)	18
Faculty Package	9
Total	72



# Recommended Course Pattern

First Year	<p>DSPS Required Courses:</p> <ul style="list-style-type: none"><li>• DSPS1001 Introduction to Policy Sciences</li><li>• DSPS1002 Data Science and Public Policy</li><li>• DSPS1003 Foundation of Data Science</li></ul> <p>Faculty Package</p>
Second Year	<p>DSPS Required Courses:</p> <ul style="list-style-type: none"><li>• DSPS2101 Research Methods for Policy Studies</li><li>• DSPS2102 Statistical Analysis for Policy Decision</li><li>• DSPS2201 Data Analytics for Public Policy I</li><li>• DSPS2301 Policy Analysis and Design Thinking</li><li>• DSPS2501 Managing Technology and Policy Innovation</li></ul> <p>Major Elective Courses</p>
Summer of Second Year	<ul style="list-style-type: none"><li>• <b>DSPS3801 Internship</b></li></ul>

Third Year	<p><b>Compulsory Resident Study Overseas (Term 1)</b></p> <p>DSPS Required Courses:</p> <ul style="list-style-type: none"><li>• DSPS3202 Data Analytics for Public Policy II</li><li>• DSPS3501 Policy Leadership and Entrepreneurship Workshop</li></ul> <p>Major Elective Courses</p>
Fourth Year	<p>DSPS Required Courses:</p> <ul style="list-style-type: none"><li>• <b>DSPS4801 Graduation Capstone Project I</b></li><li>• <b>DSPS4802 Graduation Capstone Project II</b></li></ul> <p>Major Elective Courses</p>

# Special Features of DSPS



## Overseas Exchange Experience

- Akita International University
- Technical University of Munich
- University of Auckland



## Internship

- Students are required to take the Internship course to gain practical work experiences



## Mentorship Programme

- Mentors come from public and private organizations - Jockey Club, PICO, Niche Global Fintech, Civic Exchange, New Life Psychiatric Rehabilitation Association, etc.
- CUHK Special Funding Scheme – E-mentorship project



# Career Prospects

- Students are trained to be data scientists, policy makers and designers, entrepreneurs, consultants and communicators in **public and private sectors**:



✓ Government



✓ Think tanks  
✓ Consulting firms



✓ Local and International NGOs  
✓ Startups



✓ Multinational corporations  
✓ Science & technology companies



- ❖ Intended results and unintended consequences of policies
- ❖ Who is going to evaluate? The government? The society or the media?
- ❖ Feedback mechanism
- ❖ Any positive or negative output to influence other policy formation?

**Evaluation**

**Problem Identification**

- ❖ Define and select the problems
- ❖ Who could influence which agenda to come first?
- ❖ Rational selection?
- ❖ Contradict with other measures?

**Data Science can  
be a part of  
evidences to  
design, formulate  
and improve the  
public policy**

**Implementation**

**Agenda-setting**

- ❖ Establishing priorities among the issues
- ❖ Empirical research on decision-making practices
- ❖ Policy networks

**Policy Formation  
& Decision Making**

- ❖ Objective(s) distorted, delayed or even blocked?
  - ❖ Deviated from the objectives?
  - ❖ Coordination problems?

# Courses Related to Policy Studies

## Introduction courses:

- **DSPS 1001** Introduction to Policy Sciences
- **DSPS 1002** Data Science and Public Policy



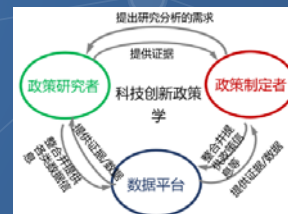
## Policy analysis and techniques:

- **DSPS 2101** Research Methods for Policy Studies
- **DSPS 2301** Policy Analysis and Design Thinking
- **DSPS 2501** Managing Technology and Policy Innovation



## Make it practical:

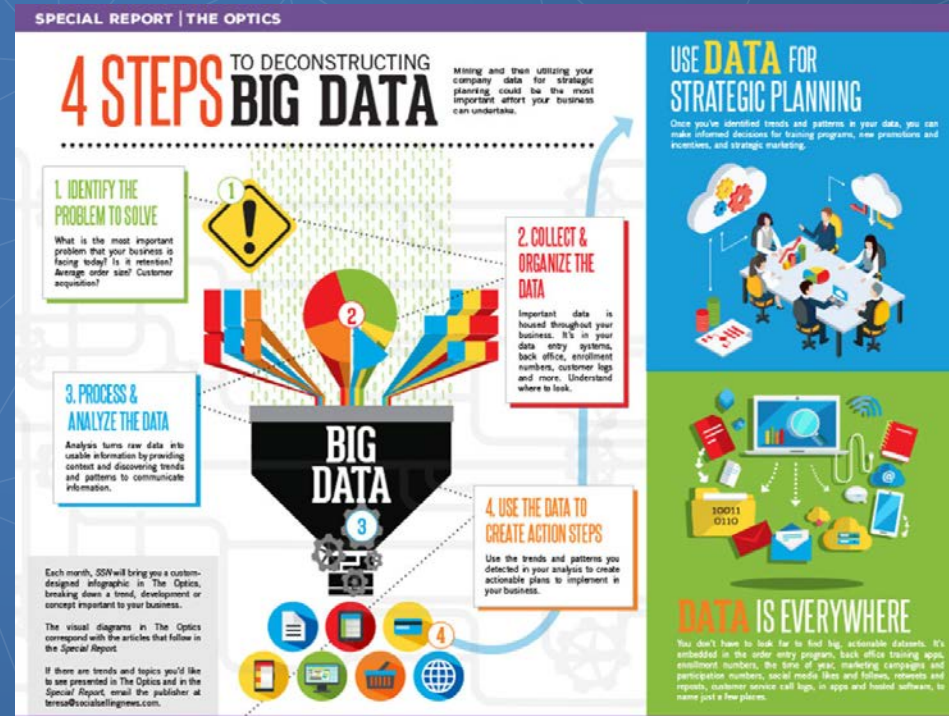
- **DSPS 3501** Policy Leadership and Entrepreneurship Workshop
- **DSPS 3801** Internship
- **DSPS 3310** Collaborative Governance in a Global Context



# Programme Structure

## - Data Science

- Why do we learn technical skills in DSPS?
- **“Data to Decisions” Analytics**
  - ✓ Use data science to improve public policy
  - ✓ Handle any social science and policy-related data
  - ✓ Present data and findings at professional standard



# Courses Related to Data Science

## Technical skills in DSPS

- ✓ **Applied Statistics**
  - fundamental probability theories
  - t-test, chi-square test, correlation, analysis of variance, etc.
- ✓ **Applied Regression**
  - cross-sectional data
  - time series data
  - pooled cross-sectional data
  - panel data
- ✓ **Statistical/Machine Learning**
  - classification, decision trees, support vector machines
  - principal component analysis, clustering



Applications

DSPS 1003



DSPS 2102

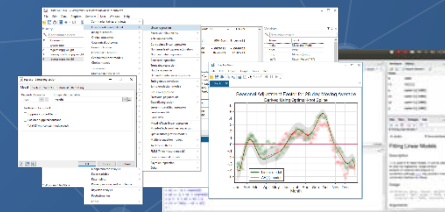
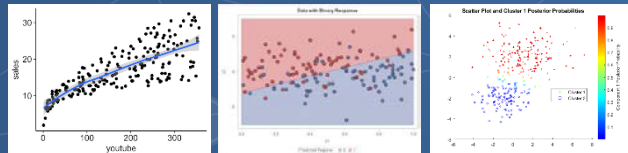


DSPS 2201



DSPS 3202

DSPS 4203





# Knowledge and Capacities Acquired

Solid knowledge of policy theories, state-of-art data science techniques, and leadership skills to formulate data-driven policy and evaluate policy outcomes



Understand  
policy issues  
with insights  
and  
intelligence  
by integrating  
theory and  
practice



Design data-  
driven and  
evidence-  
based  
solutions to  
address  
policy  
problems



Apply  
statistical and  
computational  
methods to  
analyze data  
to provide  
actionable  
insights



Present and  
visualize  
results in a  
clear and  
professional  
manner to  
enhance  
policy  
decisions

# Admissions Requirements - JUPAS

## Minimum University Requirements for JUPAS Applicants

They shall have obtained in the HKDSE Examination:

### Calculation of Admission Scores

**Best 5 Scores + Bonus Points** (6<sup>th</sup> & 7<sup>th</sup> Subject)

<u>Subject</u>	<u>Level</u>
Chinese Language	3
English Language	3
Mathematics	3
Liberal Studies	2
2 Elective Subjects <u>OR</u> 1 Elective Subject plus Mathematics Extended Part Module 1 or 2	3

### Grade Point Conversion for Category A: Core & Elective Subjects

<u>Level</u>	5**	5*	5	4	3	2	1
<u>Score</u>	8.5	7	5.5	4	3	2	1

# 2020 DSPS Admission Score

(for Reference only)

	Upper Quartile	Median	Lower Quartile
Total Reference Score <sup>^</sup>	25	24	24

<sup>^</sup>The Total Reference Score is the total score of the **Best 5 Subjects**  
(where level 5\*\* = 7, level 5\* = 6, level 5 = 5, level 4 = 4, level 3 = 3, level 2 = 2, level 1 = 1)



# Thank you!

Data Science and Policy Studies (DSPS)  
Room 516, Chen Kou Bun Building,  
Chung Chi Campus, CUHK



(852) 3943 4757



[dspd@cuhk.edu.hk](mailto:dspd@cuhk.edu.hk)



[dspd.ssc.cuhk.edu.hk](http://dspd.ssc.cuhk.edu.hk)



[dspdcuhk](#)



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