

PIA5603: INDEPENDENT PROJECT FOR PUBLIC POLICY AND MANAGEMENT

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Independent Project for Public Policy and Management

Subject Code

PIA - Public and International Affairs

Course Number

5603

Academic Unit

Public and International Affairs (PIA)

College/School

College of Liberal Arts and Social Sciences (CH)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

POL5603 Independent Project for Public Policy and Management

Exclusive Courses

Nil

Part II Course Details

Abstract

The course is an introductory course to data analytics in public administration and policy analysis. It examines the potential benefits and applications of data analytics such as machine learning, as well as the political, legal, organizational, and ethical challenges of data analytics usage and the professional responsibilities of public administrators in using these tools. The course takes a project-oriented learning approach in covering these topics and introduces applications in R to show how data analytics can be used by public service organizations.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Gain a conceptual understanding of the main tools of data analytics & visualization.	x	x	
2	Apply tools of data analytics & visualization for policy analysis and/or citizen engagement.	x	x	x
3	Critically assess the strength and limitations of data analytics in public affairs.	x	x	x
4	Clearly communicate using the spoken and written word, supported by appropriate visualizations.		x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)	
1	Lecture	Explanation of key concepts, techniques, and application	1, 2, 3	26 hours/semester
2	Workshop	Application and discussion of key concepts and techniques, including hands-on in-class exercises and discussion forum	1, 2, 3, 4	13 hours/semester

3	Four written assignments	The written assignments allow students to actively engage with actual public management or policy questions using the concepts and techniques covered in this course. They require the use of software or other tools introduced in this course. Specific details including page or word limits are provided in the instructions for each assignment.	1, 2, 3, 4	4 hours per assignment
4	Reading and preparation	Students prepare for class by reviewing assigned readings or other materials provided by the instructor, either in advance of lecture and workshop sessions, or following them.	1, 2, 3	2 hours per week

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	Four written assignments	1, 2, 3, 4	80	summative	No
2	Discussion forum	1, 2, 3, 4	5	formative - if generative AI is used, it needs to be declared and documented	Yes
3	Class participation	1, 2, 3, 4	15	formative - if generative AI is used, it needs to be declared and documented	Yes

Continuous Assessment (%)

100

Assessment Rubrics (AR)**Assessment Task**

Four written assignments (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

standard of knowledge of topic or issue being addressed; research, writing and communication skills in meetings and in the final paper

Excellent

(A+, A, A-) High level of understanding, application, and critical assessment of analytics & visualization; excellent quality of written communication including usage of visualizations

Good

(B+, B, B-) Fairly good level of understanding, application, and critical assessment of analytics & visualization; good quality of written communication including usage of visualizations. Ability to identify key challenges. Good research, writing and communication skills.

Fair

(C+, C, C-) Rudimentary level of understanding, application, and critical assessment of analytics & visualization; low quality of written communication including usage of visualizations

Marginal

(D) Poor level of understanding, application, and critical assessment of analytics & visualization; very low quality of written communication including usage of visualizations

Failure

(F) Insufficient level of understanding, application, and critical assessment of analytics & visualization; inadequate quality of written communication including usage of visualizations

Assessment Task

Discussion forum (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

standard of knowledge of topic or issue being addressed; research, writing and communication skills in meetings and in the final paper

Excellent

(A+, A, A-) Excellent quality of contributions to discussion forum and class discussion; excellent quality of oral communication

Good

(B+, B, B-) Fairly good quality of contributions to discussion forum and class discussion; good quality of oral communication

Fair

(C+, C, C-) Low quality of contributions to discussion forum and class discussion; low quality of oral communication

Marginal

(D) Very low quality of contributions to discussion forum and class discussion; very low quality of oral communication

Failure

(F) Inadequate quality of contributions to discussion forum and class discussion; inadequate quality of oral communication

Assessment Task

Class participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

standard of knowledge of topic or issue being addressed; research, writing and communication skills in meetings and in the final paper

Excellent

(A+, A, A-) Excellent quality of contributions to discussion forum and class discussion; excellent quality of oral communication

Good

(B+, B, B-) Fairly good quality of contributions to discussion forum and class discussion; good quality of oral communication

Fair

(C+, C, C-) Low quality of contributions to discussion forum and class discussion; low quality of oral communication

Marginal

(D) Very low quality of contributions to discussion forum and class discussion; very low quality of oral communication

Failure

(F) Inadequate quality of contributions to discussion forum and class discussion; inadequate quality of oral communication

Assessment Task

Four written assignments (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Understanding, application, and critical assessment of analytics & visualization; quality of written communication including usage of visualizations

Excellent

(A+, A, A-) High level of understanding, application, and critical assessment of analytics & visualization; excellent quality of written communication including usage of visualizations

Good

(B+, B) Fairly good level of understanding, application, and critical assessment of analytics & visualization; good quality of written communication including usage of visualizations

Marginal

(B-, C+, C) Rudimentary level of understanding, application, and critical assessment of analytics & visualization; low quality of written communication including usage of visualizations

Failure

(F) Insufficient level of understanding, application, and critical assessment of analytics & visualization; inadequate quality of written communication including usage of visualizations

Assessment Task

Discussion forum (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Quality of contributions to discussion forum and class discussion; quality of oral communication

Excellent

(A+, A, A-) Excellent quality of contributions to discussion forum and class discussion; excellent quality of oral communication

Good

(B+, B) Fairly good quality of contributions to discussion forum and class discussion; good quality of oral communication

Marginal

(B-, C+, C) Low quality of contributions to discussion forum and class discussion; low quality of oral communication

Failure

(F) Inadequate quality of contributions to discussion forum and class discussion; inadequate quality of oral communication

Assessment Task

Class participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Quality of contributions to discussion forum and class discussion; quality of oral communication

Excellent

(A+, A, A-) Excellent quality of contributions to discussion forum and class discussion; excellent quality of oral communication

Good

(B+, B) Fairly good quality of contributions to discussion forum and class discussion; good quality of oral communication

Marginal

(B-, C+, C) Low quality of contributions to discussion forum and class discussion; low quality of oral communication

Failure

(F) Inadequate quality of contributions to discussion forum and class discussion; inadequate quality of oral communication

Part III Other Information**Keyword Syllabus**

Data analytics and visualization in public administration and policy analysis; smart cities

Reading List**Compulsory Readings**

Title	
1	Text(s);
2	Kabacoff, Robert I. (2011) R in Action. Shelter Island, NY: Manning Publications Co.
3	Lantz, Brett. (2013) Machine Learning with R. Birmingham, UK: Packt Publishing Ltd.

Additional Readings

Title	
1	Nil