

# RES250 Spatial Data Analysis

3rd and 4th quarters, Sophomore

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<b>Instructor</b>	TSUKIHARA TOSHIHIRO
<b>Style of Class</b>	Lecture (including practicum)
<b>Number of Credits</b>	2
<b>Day and Period</b>	Friday, period 2

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## Course Description

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This course involves experiential study of methods of community analysis essential for researching local communities. Classes follow a lecture format but are held in computer labs and include many practical elements. Specifically, beginning with online data search tasks, we locate statistical data held by public authorities and measurement data gathered in the field, and undertake mapping of the findings of statistical analysis of those data. Through these activities, students enhance not only their fundamental skills of community analysis but also their understanding of ways of perceiving and understanding the notion of community.

## Course Objectives

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Develop the abilities of community analysis and cartographic processing essential for research on local communities and local environments. Specifically, students will be able to:

- 1) Search and gather statistical data (and measurement data) online using computers
- 2) Conduct regression analysis and other necessary statistical analysis on those statistical data
- 3) Conduct geographical and community studies analysis and investigation on statistics and other community data
- 4) Map the findings of the above analysis and express them in such forms as statistical maps and graphs (and eventually construct basic forms of Geographic Information System [GIS])
- 5) Present in visual format the processes and findings of community analysis

## Prerequisites

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None in particular

## Class Materials

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No textbook is specified. Handouts produced by the instructor will be distributed, but the following books are also recommended for students.

- Murayama Yuji and Komaki Nobuhiko, *Chiiki bunseki—deta nyushu/kaiseki/hyoka* [Community Analysis: Data Collection/Analysis/Evaluation], Kokon Shoin, 2013 (new edition)
- Goto Shintaro et al., *MANDARA to EXCEL ni yoru shimin no tame no GIS koza* [Course for the General Public on GIS using Mandara and Excel], Kokon Shoin, 2013 (3rd edition)
- The Human Geographical Society of Japan (ed.) *Jinbun chirigaku jiten* [Dictionary of Human Geography], Maruzen Publishing, 2013.

## Course Method

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This is a lecture course, but classes are undertaken in a computer lab and include many practical elements. Homework tasks are assigned in each class, and students must submit their responses by the next class.

## Evaluation/Assessment

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Students are evaluated from two main perspectives. One is their attitude in class and degree of active participation; the other is evaluation of responses they submit to the tasks set in each class.

## Grading

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| 50% | Attitude in class and degree of active participation |
| 50% | Responses submitted to the tasks set in each class   |

## **Course Schedule**

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**Week 1:** History of Maps and Surveying Technology

**Week 2:** Thematic Maps and Current Online Map Information Services

**Week 3:** Databases of Maps, Aerial Photos and Satellite Images and their Uses (1)

**Week 4:** Databases of Maps, Aerial Photos and Satellite Images and their Uses (2)

**Week 5:** Databases of Maps, Aerial Photos and Satellite Images and their Uses (3)

**Week 6:** Searching/Analyzing Statistical Data (1)

**Week 7:** Searching/Analyzing Statistical Data (2)

**Week 8:** Spatial Data and Attributes (1)

**Week 9:** Spatial Data and Attributes (2)

**Week 10:** Spatial Data and Attributes (3)

**Week 11:** Spatial Analysis of Fukui Area (1): National Level

**Week 12:** Spatial Analysis of Fukui Area (2): National Level

**Week 13:** Spatial Analysis of Fukui Area (3): Municipal Level

**Week 14:** Spatial Analysis of Fukui Area (4): Ward Level

**Week 15:** Spatial Analysis of Fukui Area (5): International Level

## **Preparation and Follow-up**

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Preparation: Use the recommended texts and online sources to investigate the specialist terms and concepts introduced in the previous class (this should take approximately 1 hour).

Follow-up: First of all complete the tasks set in the previous class. This will also help you revise the class content. Submit your responses by the next class (this should take approximately 1 hour).