

BELARUSIAN STATE UNIVERSITY
DEPARTMENT OF GEOGRAPHY

The Geographical expert systems on the base of the
integrations ArcGIS 9* and Erdas Imagine *
The Program of the University Course for Master Students

Lectures	12 academic hours
Laboratory GIS Project	60 academic hours
Controlled Personal GIS Project	12 academic hours

Chapter 1. The Design and designing GIS.
Design database of the project GIS. GIS-scenario. Main steps of the designing the design GIS. Modeling of the glance of the user. Matrix function/data. Dictionary given GIS.

Chapter 2. The Data acceptance for GIS.
Sources given for GIS. Geographical maps. Remote sensing. System of the satellite positioning. Geodetic technologies.

Chapter 3. The Spatial analysis Landsat in Erdas Imagine * for GIS.
Adjustment parameter Erdas Imagine *. Utility and View Menus. Attribute Editor. Vector Display. Image Drape. Image Catalog.

Chapter 4. The Integration heterogeneous and got from different sources given for spatial analysis in ArcGIS 9*.
Shape-files. Vector model. Visualization. Attributes. SQL to attribute. Buffer. Raster analysis. Searching for of the place.

Chapter 5. GIS-project in ArcGIS 9*ArcInfo.
Coverage Workstation ArcGis. Georeferencing from Google Earth. Geodatabase. New personal geodatabase. Create polygon. Attribute domains. Relationship classes. Hyperlink. Layout.
ArcMap to PDF.

Chapter 6. The Geographical expert systems on the base of the integrations ArcGIS 9* and Erdas Imagine *.
Theory of the geographical expert systems. Automation of the knowledges.
Integration ArcGIS 9* and Erdas Imagine *.

Chapter	All academic hours	Lectures	Laboratory GIS-projects	Controlled personal GIS-project
Chapter 1. The Design and designing GIS	6	2	4	
Chapter 2. The Data acceptance for GIS	6	2	4	
Chapter 3. The Spatial analysis Landsat in Erdas Imagine * for GIS	12	2	10	
Chapter 4. The Integration heterogeneous and got from different sources given for spatial analysis in ArcGIS 9*	28	2	20	6
Chapter 5. GIS-project in ArcGIS 9* ArcInfo	20	2	12	6
Chapter 6. The Geographical expert systems on the base of the integrations ArcGIS 9* and Erdas Imagine *	12	2	10	
All	84	12	60	12

Information for Reading:

1. Гурьянова Л.В. Аппаратно-программные средства ГИС. — Минск: БГУ, 2004.
2. Основы геоинформатики. Учебное пособие для студ. вузов в 2-х книгах./ Капралов Е.Г., Кошкарев А.В., Тикунов В.С. и др.; под ред. В.С. Тикунова. — М.: Издательский центр "Академия", 2004.
3. . <http://webhelp.esri.com/arcgisdesktop/9.2>
4. Гурьянова Л.В. Опыт использования ГИС-технологий ESRI Inc. и Imagine Expert Classifier при обработке снимка Landsat-7 для оценки урбанизации территории (на примере Дзержинского района Минской области) [Текст] // Третий Белорусский космический конгресс / Материалы конгресса (23-25 октября 2007 г., Минск).- Мн.: ОИПИ НАН Беларуси, 2007.- С. 170-174.
5. ArcCatalog. Руководство пользователя / ESRI: Перевод «Дата+». — М.: Изд-во «Дата+», 2001.
6. ArcToolbox. Руководство пользователя / ESRI: Перевод «Дата+». — М.: Изд-во «Дата+», 2002.
7. Редактирование в ArcMap / ESRI: Перевод «Дата+». — М.: Изд-во «Дата+», 2002.
8. Построение баз геоданных / ESRI: Перевод «Дата+». — М.: Изд-во «Дата+», 2001.
9. Работа с базами геоданных. Упражнения / ESRI: Перевод «Дата+». — М.: Изд-во «Дата+», 2002.