COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ ADK/15	**Course name:** Active participation on domestic conference
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ ADKZ/15	**Course name:** Active participation on domestic international conference
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ AZMK/15	**Course name:** Active participation on foreign international conference
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ CDVC/15	**Course name:** Citation in a domestic scientific journal
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ CZVC/15	**Course name:** Citation in a foreign scientific journal
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ CMON/15	**Course name:** Citation in a monograph
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ CSCI/15	**Course name:** Citation registered in the Web of Science database - SCI
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ SURS/15	**Course name:** Coordinate systems

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 1 **Per study period:** 14
Course method: present

Number of credits: 5

Recommended semester/trimester of the course: 4.

Course level: III.

Prerequisities:

Conditions for course completion:
The final evaluation is based on a presentation and defence of the desired individual specified semester work with the outcome evaluation 100%. Credits will be awarded to student who achieves the evaluation at the minimum level of the mark E in the resultant evaluation.

Learning outcomes:
Acquirement knowledge and attainments of astronomy and terrestrial and orbital coordinate systems with a focus on the specifics of the foundations on the global and local coordinate systems for geoinformatics.

Brief outline of the course:
Coordinate systems and their division. Terrestrial (earth) coordinate systems: topocentric and geocentric coordinate systems. Astronomical (celestial) coordinate systems: ecliptic and geocentric coordinate systems. Orbital coordinate systems: geocentric in function versus time. Geodetic coordinate systems and their specifications within the surveying data collection technologies for geoinformatics and GIS. The current coordinate systems developed by IRES. Specific transformation processes between the selected coordinate system. National coordinate system in Slovakia. SKPOS (Slovak Space Observational Service) and SLOVGERENET (Slovak Geodynamic Reference Network) in the definition of the geoinformatics bases.

Recommended literature:
Burkholder, E. F., 2001: Spatial Data, Coordinate Systems, and the Science of Measurement. In: Journal of Engineering Surveying, Vol. 127, No. 4, pp.143-156, ISSN: 0733-9453 eISSN: 1943-5428.
Fixel, J., 2000: Geodetická astronomie I a základy kosmické geodézie. Brno: Vutium, 2000.
Hofmann-Wellenhof, B. & Moritz, H., 2006: Physical Geodesy. 2nd edition, Wien-New York: Spriger, 2006, 420p.
Kabeláč, J. a Kostelecký, J., 2001: Geodetická astronomie 10. Praha: ČVUT, 2001.
Leick, A., 2004: GPS Satellite Surveying. 3rd edition, New Jersy: J. Wiley & Sons, Inc., 435p., ISBN: 0-471-05930-7.
Marien, J., 2009: Astronomy and Geodesy. Charleston: BiblioLife, 2009, 460p., ISBN: 978-1116562088.

Melicher, J., Fixel, J. a Kabeláč, J., 1993: Geodetická astronómia a základy kozmickej geodézie. Bratislava: Alfa, 1993, 400p.
Sedlák, V. a Šadera, M., 1998:Globálna geodézia I. Košice: TU Košice, 1998, 109s., ISBN: 80-88896-20-7.
Sedlák,V., 1999: Globálna geodézia II. Košice: TU Košice, 1998, 93s., ISBN: 80-88896-20-7.
Sedlák,V., 2001: Transformation procedures in 3D Conventional Coordinate Systems. In: Reports on Geodesy, No.4(59)2001, pp.57-68, Warsaw: Inst. Geodezji Wyzsej i Astronomii Geodezijnej Politechniki Warszawskiej (editor), ISBN 83-85287-2.
Seeber, G., 2003: Satellite Geodesy, 2nd edition, Berlin: De Gruyter, 2003, 591p., ISBN: 3-11-017549-5.
Soffel, M. & langhaus, R., 2012: Space-Time Reference Systems. Heidelberg-New York-Dordrecht-London: Springer, 2012, ISBN: 978-3-642-30225-1 (print), ISBN: 978-3-642-30226-8 (online).
Source Wikipedia, 2011: Coordinate Systems: Cartesian Coordinate System, Spherical Coordinate System, Abscissa, Polar Coordinate System, Cylindrical Coordinate System. Publisher: Books LLC / Wiki Series, 2011, 72p., ISBN-13: 978-1156431238.
Torge, W., 2001: Geodesy. 3rd edition, Berlin-New York: De Gruyter, 2001, 416p., ISBN: 3-11-017072-8.

Course language:
Slovak

Notes:
without notices

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Ing. Vladimír Sedlák, PhD.

Date of last modification: 30.07.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ MZDG/15	**Course name:** Data collection methods for GIS

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: present

Number of credits: 10

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
The resultant evaluation is based on the exam passed with the evaluation maximum 100%. Credits will be awarded to the student who achieves the evaluation at the minimum level of the mark E in the resultant evaluation.

Learning outcomes:
Acquisition of theoretical knowledge and attainments of the data collection methodology for the creation of a data bank for GIS. Acquaintance with the general and specific principles and technologies of a primary and secondary data collection.

Brief outline of the course:
Data collection for GIS - an introduction. Data types in GIS-s and their classification, geometric and thematic data. The geometry of spatial objects. Characteristic vector data, their areas and resources. Sources of raster data (satellite images of the Earth's surface, orthophoto maps, scanned maps, plans and aerial images) and their characteristics. Collecting spatial data: primary (direct) and secondary (indirect) collection. Methods of primary data collection (geo-data): surveying methods - detailed mapping, GPS measurements, photogrammetry remote sensing) and other methods. Secondary data collection methods: digitizing, enters of the alphanumeric data. The importance of secondary sources for data collection (state map works, cadastral maps, thematic map works, technical maps, etc.) and their archiving.

Recommended literature:
Decker,D., 2001: GIS Data Sources. 2nd edition, Hoboken: John Wiley & Sons Inc., 2001, ISBN: 978-047135505.
Demers, M., 2005: Fundamentals of geographic inrofmation systems. 3rd edition, Hoboken: John Wiley & Sons, , 2005, 468p.
Mennis, J. L., Peuquet, D. J. & Qian, L., 2000: A conceptual framework for incorporating cognitive principles into geographical database representation. In: J. Geographical Information Science, 2000, Vol. 14, No. 6, pp.501-520, ISSN: 1365-8816 print / ISSN: 1362-3087 online.
Mitášová I., Ivánová I. & Chalachanová J., 2001: Kvalita údajov v geoinformačných bázach. In: Úlohy geodézie a kartografie pri tvorbe a správe ZB GIS - zborník referátov zo sympózia, Trenčín 2001, pp.37-44.

Mitchell, A., 1999: The ESRI Guide to GIS analysis, Volume 1: Geographic Patterns and Relationships. 1st edition, Redlands: ESRI Press, 1999, 186p, ISBN: 9781879102064.
Mitchell, A., 2005: The ESRI Guide to GIS analysis, Volume 2: Spatial Measurements and Statistics. 1st edition, Redlands: ESRI Press, 2005, 238p., ISBN: 9781589481169.
Rigaux, P., Scholl, M. & Voisard A., 2001: Spatial databases: With application to GIS. 1st edition, San Francisco: Morgan Kaufmann Publisher, 2001, ISBN: 978-1-55860-588-6.
Shekhar, S. & Chawla, S., 2003: Spatial databases: A tour. 1st edition, San Francisco: Morgan Kaufmann Publisher , 2003, ISBN: 978-0130174802.
Slocum, T. et al., 2005: Thematic cartography and geographic visualizaion. 3rd edition, Upper Saddle River: Pearson / Prentice Hall, USA, 2005, 518p. ISBN: 0130351237.

Course language:
Slovak

Notes:
without notices

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Ing. Vladimír Sedlák, PhD.

Date of last modification: 30.07.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ ODIZ/15	**Course name:** Defence of Doctoral Thesis
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 30	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides:
Date of last modification: 10.09.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ DMR/15	**Course name:** Digital elevation models
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PPDS/15	**Course name:** Dissertation prospectus for a dissertation exam
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD.
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ ZVP/15	**Course name:** Elements of scientific work and ethics
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ AJD1/07	**Course name:** English Language for PhD Students 1

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: present

Number of credits: 2

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 425

N	Ne	P	Pr	abs	neabs
0.0	0.0	67.53	0.0	32.47	0.0

Provides: PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD.

Date of last modification: 03.05.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ AJD2/07	**Course name:** English Language for PhD Students 2

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: present

Number of credits: 3

Recommended semester/trimester of the course: 2.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 421

N	Ne	P	Pr	abs	neabs
0.0	0.0	89.79	1.9	8.31	0.0

Provides: PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD., Mgr. Barbara Mitríková

Date of last modification: 03.05.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ GKAD/15	**Course name:** Geographic cartography
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities: ÚGE/TMG/15 and ÚGE/MHG/15 and ÚGE/MZDG/15 and ÚGE/MFGV/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides:
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ GISD/15	**Course name:** Geographic information systems
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities: ÚGE/TMG/15 and ÚGE/MZDG/15 and ÚGE/MFGV/15 and ÚGE/MHG/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides:
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ZIG/15	**Course name:** Internal grant award
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ MFGV/15	**Course name:** Methods of physico-geographical research
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 2 **Per study period:** 28 **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course: 2.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides: doc. RNDr. Zdenko Hochmuth, CSc.
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ NEU2/15	**Course name:** Neural networks
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: doc. RNDr. Gabriela Andrejková, CSc.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚFV/NGM/15	**Course name:** Nontraditional geostatistical methods

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 1 **Per study period:** 14
Course method: present

Number of credits: 5

Recommended semester/trimester of the course: 4.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To acquaint students with interdisciplinary approches to solving of geostatistical problems, based on models from statistical physics.

Brief outline of the course:
Geostatistical problems solved by innovative approach, an alternative to conventional geostatistical methods, based on models from statistical physics. Getting familiar with the basic concepts of statistical physics and their application to the physical lattice spin models. Geostatistical data modeled as correlated spatial random fields defined through local interactions - an analogy with statistical-physical spin models. Demonstrating the effectiveness and universality of defined models in the processing of bulky, for example, satellite or radar datasets.

Recommended literature:
PATHRIA, R.K., BEALE P.D. 2007: Statistical Mechanics. Elsevier.
MECKE, K.R. (Ed.), STOYAN D. (Ed.) 2000: Statistical Physics and Spatial Statistics. Springer.
LANDAU, D.P., BINDER. K 2009: A guide to Monte Carlo simulations in statistical physics. Cambridge University Press.
ŽUKOVIČ, M., HRISTOPULOS, D.T. 2009: Classification of missing values in spatial data using spin models. Physical Review E 80 (1) 011116.

Course language:

Notes:

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: doc. RNDr. Milan Žukovič, PhD.

Date of last modification: 03.05.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PDS2/15	**Course name:** Parallel and disributed systems
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: doc. RNDr. Jozef Jirásek, PhD., RNDr. František Galčík, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ POVK/15	**Course name:** Participation in the conference committee
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ SDP/15	**Course name:** Participation in the domestic grant project (APVV, VEGA, KEGA,...)
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ SIG/15	**Course name:** Participation in the internal grant project
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ SMP/15	**Course name:** Participation in the international grant project
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PAT/15	**Course name:** Patents, inventions, software
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VVS/15	**Course name:** Presentation on the institute's scientific seminar
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PROG/15	**Course name:** Programming for GIS
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ DPZD/15	**Course name:** Remote sensing
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities: ÚGE/TMG/15 and ÚGE/MFGV/15 and ÚGE/MHG/15 and ÚGE/MZDG/15	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides:
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ MDPZ/15	**Course name:** Remote sensing methods

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 1 **Per study period:** 14
Course method: present

Number of credits: 5

Recommended semester/trimester of the course: 3.

Course level: III.

Prerequisities:

Conditions for course completion:
The resultant evaluation is based on the exam passed with the evaluation maximum 100%. Credits will be awarded to the student who achieves the evaluation at the minimum level of the mark E in the resultant evaluation.

Learning outcomes:
Acquiring general knowledge on methodology and theoretical principles of remote sensing methods and practical skills in remote sensing data processing.

Brief outline of the course:
Physical principles of remote sensing and interaction of electromagnetic energy with object on the Earth. methods of passive remote sensing (photogrammetry and multispectral scanning). Processing aerial imagery using using a photogrammetric workstation. Processing multispectral satellite imagery with supervised and unsupervised classification. Methods of active remote sensing (laser scanning, radar, sonar). Processing airborne and terrestrial laser scanning data. Interpretation of radar (SAR) imagery and sonar recordings.
Praktická časť cvičení je zameraná na nasledovné okruhy: zdroje údajov DPZ na internete, fyzikálne vlastnosti EMŽ, geometrické parametre leteckej meračskej snímky, plánovanie letu pre letecké snímkovanie a laserové skenovanie, farebné syntézy, úprava obrazového záznamu, riadená a neriadená klasifikácia snímok. Cvičenia predpokladajú znalosť práce s GIS softvérmi.

Recommended literature:
LILLESAND, KIEFER, CHIPMAN 2008: Remote Sensing and Image Interpretation, New York, USA (Wiley).
JENSEN, R. J. 2005: Remote Sensing: An Earth Resource Perspective, New Jersey, USA (Prentice Hall).
ŽELEZNÝ, M. (2012): Dálkový průzkum Země (skriptá), Západočeská univerzita v Plzni, Katedra kybernetiky. 93 s. URL: http://www.kky.zcu.cz/cs/courses/dpz.
CANADIAN CENTRE FOR REMOTE SENSING (2012): Fundamentals of Remoste Sensing (učebný text v angličtine, in English), 256 s. URL: http://www.nrcan.gc.ca/earth-sciences/geography-boundary/remote-sensing/fundamentals/1430.
BITTERER, L. 2005: Fotogrametria. Interné učebné texty z geodézie, fotogrametrie, katastrálneho mapovania na stránke http://svf.uniza.sk/kgd/literatura.html

Course language:
Slovak, Czech, English

Notes:

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Michal Gallay, PhD.

Date of last modification: 30.07.2015

Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ MHG/15	**Course name:** Research methods in human geography
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 2 **Per study period:** 28 **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course: 2.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. RNDr. Peter Spišiak, CSc.
Date of last modification: 30.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPDN/15	**Course name:** Scientific paper in a domestic journal not registered in the Current Contents database
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPDK/15	**Course name:** Scientific paper in a domestic journal registered in the Current Contents database
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPZN/15	**Course name:** Scientific paper in a foreign journal not registered in the Current Contents database
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPZK/15	**Course name:** Scientific paper in a foreign journal registered in the Current Contents database
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPNZ/15	**Course name:** Scientific paper in a non peer-reviewed proceedings
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VPRZ/15	**Course name:** Scientific paper in a peer-reviewed proceedings
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ SWI2/15	**Course name:** Software engineering
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: doc. RNDr. Gabriel Semanišin, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PAMH/15	**Course name:** Spatial analyses and modelling in human geography
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides: prof. RNDr. Peter Spišiak, CSc.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PAMF/15	**Course name:** Spatial analyses and modelling in physical geography
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 1 **Per study period:** 14 **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides: doc. RNDr. Zdenko Hochmuth, CSc.
Date of last modification: 31.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/JSD/14	**Course name:** Spring School for PhD Students
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week: Per study period:** 4d **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 68

abs	n
100.0	0.0

Provides: doc. RNDr. Vladimír Zeleňák, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VSV/15	**Course name:** Student scientific work supervision
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ AZSP/15	**Course name:** Study stay abroad
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

abs	n
0.0	0.0

Provides:
Date of last modification:
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PPC/15	**Course name:** Teaching activity
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ TMG/15	**Course name:** Theory and methodology of geoinformatics
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 2 **Per study period:** 28 **Course method:** present	
Number of credits: 10	
Recommended semester/trimester of the course: 1.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD.
Date of last modification: 03.05.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ VZP/15	**Course name:** Thesis supervision
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification:	
Approved: prof. Mgr. Jaroslav Hofierka, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/WEB/15	**Course name:** WebGIS and interoperability of geographic information

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 1 **Per study period:** 14
Course method: present

Number of credits: 5

Recommended semester/trimester of the course: 4.

Course level: III.

Prerequisities:

Conditions for course completion:
Consultations and hand in the outputs

Learning outcomes:
Proposal and creation interactive web portal publishing spatial geodata, Working with various types of geodata.

Brief outline of the course:
Basic concepts and definitions; History of internet and its influence on GIS; Standards of distributed GIS Servers, GML; Web applications and services (WMS, WFS); Webserver (APACHE); Map Server (MapServer, Geoserver, ArcIMS, MapInfo MapXtreme, AutoDesk MapGuide, GeoMedia WebMap), Proposal of map server based on selected platform a its testing; client elements of map server (OpenLayers, GeoExt, Ext JS), geodata warehouse and sharing.
Basic concepts and definitions; Environment for generating and processing spatial geodata – Desktop GIS, remote sensing software, software for data collection, Spatial DBMS, ESDA, Data formats and libraries; ASCII.

Recommended literature:
Fu, P., & Sun, J. (2010). Web GIS: principles and applications. Esri Press.
Peng, Z.-R., & Tsou, M. (2003). Internet GIS: Distributed geographic information services for the internet and wireless networks. Hoboken, N.J: Wiley.
GDAL, 2012: GDAL Raster Formats, gdal.com [online]. http://www.gdal.org/formats_list.html>
GDAL, 2012: OGR Vector Formats, gdal.com [online]. http://www.gdal.org/ogr/ogr_formats.html>

Course language:

Notes:

Course assessment
Total number of assessed students: 0

N	P
0.0	0.0

Provides: prof. Mgr. Jaroslav Hofierka, PhD., RNDr. Ján Kaňuk, PhD.
Date of last modification: 30.07.2015
Approved: prof. Mgr. Jaroslav Hofierka, PhD.