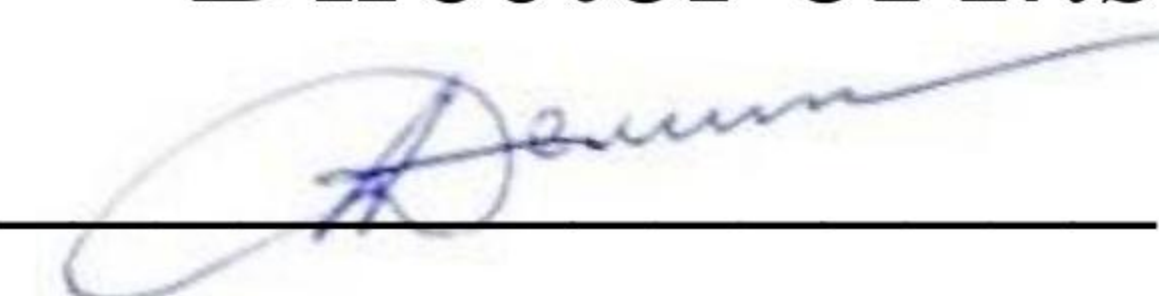


APPROVED BY

Director of *Institute of Cybernetics*

 / *Dmitriy M. Sonkin*

Knowledge Management System

Field of Study: *Big Data Solutions*

Programme name: *Software Engineering*

Level of Study: *Master Degree Programme*

Year of admission: 2019

Semester, year: 3, 2

ECTS: 5

Total Hours: 180

Contact Hours: 64


- **Lectures:** 32
- **Labs:** 32
- **Practical experience:**
- **Assessment:** *credit test & project, exam*

Department: *Software Engineering*

Head of Department

 / V.S. Sherstnev

Instructor(s)

 / E.I. Gubin

Knowledge Management System

Course Overview

Course Objectives	<i>The course is designed to develop and improve students ' skills in managing the company's intellectual capital based on situational analysis and assessment of the company's strategic prospects.</i>
Learning Outcomes	<i>The learning outcomes are to apply key technologies used in acquiring, organizing, storing, and analyzing big data</i>
Course Outline	<i>The course is a systematic presentation of theoretical and methodological issues related to the identification, use, creation, distribution and storage of company knowledge in order to increase its competitiveness.</i>
Prerequisites (if available)	<i>Introduction to Big Data, Data Analysis Methods, Big Data Programming Tools</i>
Course Structure	<ol style="list-style-type: none"> 1. <i>Post-industrial society and its production capabilities.</i> 2. <i>Knowledge-based economy, its pillars: institutional structure, innovation system, education and training, information infrastructure.</i> 3. <i>Conditions and factors that led to the formation of the knowledge economy, its characteristics and basic evaluation indicators. Features of knowledge as a resource.</i> 4. <i>Basic properties of the concept of "knowledge". Classification of knowledge. Knowledge management as a science: object and subject of research</i>
Facilities and Equipment	<i>Excel, Windows</i>
Grading Policy	<p><i>In accordance with TPU rating system we use:</i></p> <ul style="list-style-type: none"> - <i>Current assessment which is performed on a regular basis during the semester by scoring the quality of mastering of theoretical material and the results of practical activities (performance tests, perform tasks, problem solving). Max score for current assessment is 60 points, min – 40 points.</i> - <i>Course final assessment (exam/ credit test) is performed at the end of the semester. Max score for course final assessment is 40 points, min – 22 points.</i> <p><i>The final rating is determined by summing the points of the current assessment during the semester and exam (credit test) scores at the end of the semester. Maximum overall rating corresponds to 100 points, min pass score is 32.</i></p>
Course Policy	<i>Students are expected to make and present the results of all tasks provided in practice and lab works.</i>
Teaching Aids and Resources	<p><i>Compulsory Readings:</i></p> <p><i>Zamyatina, O. M. Modeling and Simulation : study aid / O. M. Zamyatina; National Research Tomsk Polytechnic University (TPU). — Tomsk: TPU Publishing House, 2014. — URL: https://www.lib.tpu.ru/fulltext2/m/2014/m237.pdf(дата обращения: 18.08.2020). — Режим доступа: из корпоративной сети ТПУ. — Текст : электронный.</i></p> <p><i>Additional Readings:</i></p>

	<p>1. http://machinelearning.ru/ – ресурс MachineLearning.ru, дата обращения 25.12.2016 г.</p> <p>2. https://azure.microsoft.com/ru-ru/services/machine-learning/ - ресурс Microsoft, дата обращения 25.12.2016 г.</p> <p>3. https://aws.amazon.com/ru/machine-learning/ - ресурс Amazon Machine Learning, дата обращения 25.12.2016 г.</p> <p>4. http://www.sas.com/en_us/insights/analytics/machine-learning.html - ресурс SAS Machine learning, дата обращения 25.12.2016 г.</p>
Instructor (-s)	<i>Gubin E gubine@tpu.ru</i>