

**JSC «Kazakh-British Technical University»
Faculty of Information Technology**

**APPROVED BY
Dean of FIT**

_____ **Bisembayev A.S.**
«_____» _____ **2022**

SYLLABUS

Discipline: Information communication technology

Number of credits: 3

Term: Autumn 2022

Instructor's full name: Gaétan Chardon

Personal Information about the Instructor	Time and place of classes		Contact information	
	Lectures	Office Hours	Tel.:	e-mail
Gaétan Chardon, Assistant professor	According to schedule			g.frachardon@kbtu.kz

Course duration:

Lectures 2 hours a week, practices 1 hour a week, 14 weeks

Course pre-requisites:

This course is intended for beginners in programming. Students are expected to be able to:

- Create and run a python program
- Use Jupyter Notebook
- Understand the basic concepts of programming (variables, list, functions, ...)
- Install and use libraries

Course Objective:

This course encourages learners to develop lifelong skills, including:

- Get data from different sources
- Manage and visualize data
- Analyse relations between data
- Draw conclusions from this data
- Share the conclusion on different media

Literature:

- “Data wrangling with python” (2016) by Jacqueline Kazil and Katharine Jarmul
- “Python for Data Analysis” (2017) by Wes McKinney

COURSE CALENDAR

	Class work				SIS
Week	Topic	Lecture hours	Laboratory hours	Chapters for reading	
1.	Introduction Data collection (1/2): Files processing	2	1		Ass.1
2.	Data collection (2/2): Web scrapping	2	1		Ass.2
3.	Databases: SQL	2	1		Ass.3
4.	Data cleaning	2	1		Ass.4
5.	Data visualization	2	1		Ass.5
6.	Machine learning (1/2)	2	1		Ass.6
7.	Machine learning (2/2)	2	1		Ass.7
8.	Midterm exam				
9.	Neuronal network with TensorFlow (1/2)	2	1		Ass.8
10.	Neuronal network with TensorFlow (2/2)	2	1		Ass.9
11.	Creating a website with Django	2	1		Ass.10
12.	Publishing a website on Heroku	2	1		Ass.11
13.	Create a user interface with Tkinter (1/2)	2	1		Ass.12
14.	Create a user interface with Tkinter (2/2)	2	1		Ass.13
15.	End term exam				

COURSE ASSESSMENT PARAMETERS

Type of activity	Final scores
Midterm	10%
Endterm	10%
Assignments	40%
Final exam	40%
Total	100%

Criteria for evaluation of students during semester:

[illegible]