SECTION A: DEFINITIVE

1.	**General course informa ion**		
1.1	School: Science and Technology	1.6	Credits (ECTS): 6
1.2	Course Title: Human-Computer Interaction	1.7	Course Code: CSCI 281
1.3	Pre-requisites: CSCI 152 Performance and Data Structures	1.8	Effective from: *Fall 2018*
1.4	Co-requisites: N/A		
1.5	Computer Science Elective Programs: Computer Science *(in which the course is offered)*		

2.	**Course descrip ion (max.150 ords)**

This course is concerned with a broader scope of issues, topics and methods than traditional human computer interaction (HCI), with an interdisciplinary flavour ranging from cognitive science and interaction design aspects, within and beyond computer science, to software engineering and formal methods approaches to modelling and verification. The number of different types of interactive systems available today has increased steadily in the past decade, so this course, likewise, has been expanded to cover this. During this course, we will discuss a wide range of models of interactive systems, how cognitive, social and emotional issues apply to interaction design, and how to incorporate human-computer interaction aspects within the software process development.

3.	**Summa i e assessmen me hods** (tick if applicable)**:**		
3.1	Examination	3.5	Presentation
3.2	Term paper	3.6	Peer-assessment
3.3	Project	3.7	Essay
3.4	Laboratory Practicum	3.8	Other *(specify)* _____
4.	**Course aims**		

The aims of the course are:

1. to make students aware of the need to take users into account throughout the software development process, by directly involving users in any stage of such process, from the requirements elicitation to the final summative evaluation, and present them with a range of techniques to realise this objective;
2. to introduce students to the foundations of cognition and show them how cognitive principles and empirical findings
   2.1. impact the way interaction design is carried out;
   2.2. have led to the definition of models of human behaviour (cognitive models);
   2.3. have led to the formulation of practical design principles;
3. to carry out design and modelling on real world case studies;
4. to understand how to use cognitive models in usability evaluation;
5. to train students to work in small teams carrying out collaborative work using both analytical and creative thinking.

5.	**Course learning ou comes (CLOs)**
5.1	By the end of the course the student will be expected to be able: 1. to understand the various aspects of HCI as an interdisciplinary area; 2. to master techniques for data gathering, analysis, requirement elicitation, design and evaluation and apply them to interaction design using practical case studies; 3. to know how to involve stakeholders in the design process; 4. to know the foundations of human memory, perception and cognition; 5. to understand the principles of formal modelling and verification and their relevance to the analysis of non-functional properties in general as well as specifically to safety and usability; 6. to use technologies to design engaging and enjoyable rather than frustrating interactive systems; 7. to master techniques for abstracting, modelling and analysing interactive systems and to apply them to practical case studies.

5.2

CLO ref #	Program Learning Outcome(s) which CLO is linked	Graduate Attribute(s) which CLO is linked
1	Identify and describe the significant issues, challenges, and milestones within the field.	
	Possess an in-depth and sophisticated understanding of their domain of study.	
	Be intellectually agile, curious, creative and open-minded.	
2,3	Identify and describe the significant issues, challenges, and milestones within the field.	
	Assess technical problems and establish requirements for their solution.	
	Identify the theoretical capabilities and practical limitations related to computing systems.	
	Both function independently and serve effectively on a team to accomplish common goals.	
	Demonstrate high levels of communication skills in areas such as public speaking and presentation techniques, writing, and the production of supporting documentation in a variety of media Possess an in-depth and sophisticated understanding of their domain of study.	
	Be intellectually agile, curious, creative and open-minded.	
	Thoughtful decision-makers who know to involve others	
	Fluent and nuanced communicators across languages and cultures	
4,5,6,7	Identify and describe the significant issues, challenges, and milestones within the field.	
	Assess technical problems and establish requirements for their solution.	
	Possess an in-depth and sophisticated understanding of their domain of study.	
	Be intellectually agile, curious, creative and open-minded.	

SECTION B: NON-DEFINITIVE
Course S llabus
Details of teaching, learning and assessment

6.	De ailed course informa ion		
6.1	Academic Year: 2020-21	6.3	Schedule (class days, time): **TR 15:00-16:15**
6.2	Semester: Fall	6.4	Location (building, room): online mode

7.	Course leader and eaching s aff			
Posi ion	**Name**	**Office #**	**Con ac informa ion**	**Office hours**
Course Leader	Antonio Cerone	7e.422	antonio.cerone@nu.edu.kz	by appointment
Course Instructor(s)	Antonio Cerone	7e.422	antonio.cerone@nu.edu.kz	by appointment
Teaching Assistant(s)	Madina Saparbayeva		madina.saparbayeva@nu.edu.kz	

8. Course Ou line

Session	Da e	Topics and Assignmen s (tentative)	Course Aims (ref. # only, see item 4)	CLOs
Week 1		Introduction	1	1
Week 2		ID Basics: Usability, UX, Design Goals	1	1,2
Week 3		ID Basics: Safety and the Process of ID	1	2,3
Week 4		ID Basics: Conceptual Design	2	4
Week 5		ID Basics: Scenarios, and Navigation	2,3	4
Week 6		Review and Midterm 1	1.2	1,2,3,4
Week 7		Human Component, Memory, Attention	2	4,5
Week 8		Thinking and Human Behaviour	2.1,3	6
Week 9		Problem Solving, Learning and Interaction	1,2,3	2,4

Week 10		Screen Design and Layout	1,2,3	2,4
Week 11		Review and Midterm 2	1,3,3,4,5	2,3,4,5,6
Week 12		Data Gathering and Analysis	1,2,3,4	2,4
Week 13		Evaluation	2.2,2.3,5	2,5,6,7
Week 14		Team Presentation Q&A Session	1,2,3,4,5	1-7

9.	**Learning and Teaching Me hods**
1	Live online lecture-demonstration by teacher
2	Live online formal face-to-face lectures and office hours
3	Group/pair problem solving
4	Students presenting solutions and research reviews to the class through prerecorded videos followed by Q&A sessions.

10. Summa i e Assessmen s (en a i e)

#	Ac i i	Da e (tentative)	Weigh ing (%)	CLOs
	Midterm 1	Week 6	25%	1-4
	Midterm 2	Week 11	25%	2-6
	Research Presentation	Week 12	15%	2,4
	Team Report and Presentation	Week 14	25%	1-7
	Participation and Homework	All Semester	10%	1-7

11. Grading

Le er Grade	**Percen range**	**Grade descrip ion** (where applicable)

A	95-100	See Section 6 of "Academic Policies and Procedures for Undergraduate Programs" (available at https://registrar.nu.edu.kz/policies-and-procedures)
A-	90-94.9	
B+	85-89.9	
B	80-84.9	
B-	75-79.9	
C+	70-74.9	
C	65-69.9	
C-	60-64.9	
D+	55-59.9	
D	50-54.9	
F	0-49.9	

12. Learning resources (use a full citation and where the texts/materials can be accessed)	
E-resources, including, bu no limi ed o: da a-bases, anima ions, simu-la ions, professional blogs, ebsi es, o her e-reference ma erials ideo, audio, diges s)	TBD -- On-line digital resources (readings, references, tutorials) will be utilized throughout the course.
E- ex books	N/A
Labora or ph sical re-sources	N/A
Special sof are pro-grams	N/A
Journals (inc. e-jour-nals)	N/A
Tex books	A. Dix et al. Human-computer Interaction, Pearson, 2004 B. Preece, Rogers, Sharp. Interaction Design, Wiley, 2019
13. Course expec a ions	

List the expectations of students for the course regarding the course attendance, class participation, group work, late/missed submission of assignments.

Attendance
Class attendance records will be maintained for all classes, although it may directly affect your grade only if it occurs on the day of a peer's presentation. A student is considered absent if arriving at the class 15 or more minutes late.

Electronic Resources

You are expected to regularly check your Nazarbayev University email for updates and announcements about the course. You are also required to use Moodle as determined by the instructor.

We live in a time when a vast amount of information is available online and you can easily find published source code or answers to questions on assignments. Before using this information, ask yourself if you are misrepresenting others' work as your own. For example:

- Copying essays or reports you find online and turning it in is cheating and will be treated as such.
- Reading a Wikipedia page that helps you understand an important concept to complete an assignment is perfectly acceptable.
- There is a wide grey area between the above examples. Keep in mind that it's the instructor's judgment that counts! If you're ever unsure about whether an action is permissible, ***k*** before you do it.

Assignment Submission and Late Policy

Presentation abstracts, written reports and presentation slides are due at 23:55 (11.55 pm) on the date specified in the course schedule. **Your assessmen ill lose 10 poin ou 100 for an par of he ork required for he assessmen ha is submi ed up a e.** For example, a perfect presen abstract and/or slides submitted tw e would earn a grade of just 90 out o **ill ge 0 for he en ire assessmen r of he ork required for he asses submi ed mo hours la e.** T ti e of submission is de he ti st p the course M ns when the w k submitted.

Classroom Behavio

Students are expected to ct respectfully towards their fellow classmates, TAs and ins uctors, inside and outside classrooms, by:

- coming to class on time;
- refraining from excessive private conversations;

14.	**Academic Integrity Statement**

Nazarbayev University and The School of Science and Technology have established high standards for academic integrity, using an approach in which students are trained to produce original work according to professional standards, and to properly cite and reference the work of others when it is appropriate to do so. The specific guidelines are published in the NU Student Handbook.

However, different classes have different rules about collaboration. These are the standards you will be held to for this class. Unless otherwise noted on the assignment, we expect you to know and follow these rules.

You may only get help on graded assignments from designated people. You are always welcome to get help on an assignment from your instructor or teaching assistant. They may help you at the computer, on paper, or any way they believe will be effective.

Do ***t*** give direct help to, nor receive direct help from, your classmates on a graded assignment. ***N h k t l t k t th k***. Homework should be completed individually or within the designated group. In cases where inappropriate sharing occurs, ***ll t d t l d t f lt***, regardless of whether they are the source or recipient of the shared work. If something has your name on it, you are claiming it as your own work and academic integrity rules apply.

The severity of sanctions imposed for an academic integrity violation will depend on the transgression and ascertained intent of the student. Penalties for a first offense may range from failing the assignment to failing the course and referral to an academic review board. You can find more information about the consequences of academic integrity violations from Student Affairs**.**

15.	**E-Learning**

If the content of the course and instruction will be delivered (or partially delivered) via digital and online media, consult with the Head of Instructional Technology to complete this section and/or provide a separate document complementary to this Template.

16.	**Approval and review**

Date of Approval:	**Minutes #:**	**Committee:**
Date(s) of Approved Change:	**Minutes #:**	**Committee:**