

Hanoi, August 22nd, 2023

DECISION

**On approving the teaching plan of bachelor programs
in academic year 2023-2024**

RECTOR

OF UNIVERSITY OF SCIENCE AND TECHNOLOGY OF HANOI

Pursuant to Decision No. 2067/QĐ-TTg dated December 9th, 2009 of the Prime Minister on the establishment of University of Science and Technology of Hanoi (USTH);

Pursuant to Decision No. 2557/QĐ-TTg dated December 30th, 2016 of the Prime Minister on Regulations on organization and operation of USTH;

Pursuant to the Undergraduate Academic Policies promulgated with Decision No. 1292/QĐ-ĐHKHCN dated December 22nd, 2022 of the Rector of USTH;

Pursuant to the Regulation of bachelor's double degree training program promulgated with Decision No. 107/QĐ-ĐHKHCN dated February 22nd, 2023 of the Rector of USTH;

At the proposal of Director of Department of Academic Affairs.

DECIDES:

Article 1. To approve the teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024 as detailed in the Annexes promulgated with this Decision.

Article 2. Director of Administration, Director of Department of Academic Affairs, Directors of academic departments, Director of Foreign Language Center, Head of Organization - Personnel Department, Head of Accounting and Finance Department, Director of Quality Assurance and Examination Department and involved individuals shall be in charge of implementing this Decision./.

Recipients:

- As Article 2;
- Rector;
- Vice Rectors;
- Archive: VT, DAA.MH.

PRINCIPAL RECTOR

(Signed and sealed)

Prof. Jean-Marc Lavest

ANNEX 1: TEACHING PLAN OF THE FIRST YEAR (B1) OF BACHELOR PROGRAMS (EXCEPT FOR AERONAUTICAL ENGINEERING MAJOR)

IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	BIO1.001	Cellular biology	4	41	30	6	5	M	Lê Thanh Hương Nguyễn Thanh Hiền Nguyễn Văn Phụng Nguyễn Thị Trang Huyền Trần Thị Thanh Tâm Trần Tuấn Anh Nguyễn Cẩm Linh Trần Thị Thu Phương Trần Sơn Hoàng Lê Thị Dung Trần Huyền Linh Nguyễn Quỳnh Hoa	F+I	10/2023	02/2024
2	CHE1.001	General Chemistry 1	4	40	28		12	M	Trần Đình Phong Lê Thị Hương Phạm Hồng Ngọc Trần Bửu Đăng Nguyễn Văn Quyền Đàm Thế An Nguyễn Thị Quyên Nguyễn Ngọc Đức Vũ Cẩm Tú	F+I	10/2023	02/2024
3	ICT1.001	Introduction to informatics	3	33	18	15		M	Nguyễn Đức Dũng Phan Thanh Hiền Phạm Đức Bình Trần Anh Tú Lê Hữu Tôn Nguyễn Xuân Thành	F+I	10/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
4	MAT1.001	Calculus 1	4	48	24		24	M	Lê Hải Khôi Lương Thái Hưng Đỗ Hoàng Sơn Đào Quang Khải Phạm Việt Hùng Nguyễn Huyền Mười	F+I	10/2023	02/2024
5	MAT1.002	Linear Algebra	4	48	24		24	M	Nguyễn Việt Dũng Nguyễn Bích Vân Lê Xuân Thanh Võ Quốc Bảo Nguyễn Thế Hoàng Lê Hải Yến Hà Minh Lam	I	10/2023	02/2024
6	PHY1.001	Fundamental Physics 1	4	44	26		18	M	Nguyễn Thị Hồng Vân Nguyễn Hồng Nam Vũ Ngọc Linh Trịnh Bích Ngọc Nguyễn Thị Thanh Ngân Nguyễn Mai Chung Nguyễn Thị Ngọc	F+I	10/2023	02/2024
7	PHA1.001	Physicochemistry 1	3	30	24	6		M	Nguyễn Hồng Vân, Nguyễn Phương Nhung	F+I	10/2023	02/2024
8	PHA1.002	Pharmaceutical botany	5	62	40	17	5	M	Lê Thị Vân Anh, Nguyễn Thế Cường	F+I	10/2023	02/2024
9	PHA1.003	Introduction to Pharmacology	3	30	20	10		M	Nguyễn Thị Kiều Oanh, Nguyễn Quang Thái	F+I	10/2023	02/2024
10	PHA1.007	Biostatistics	4	40	18	13	9	M	Phạm Thế Hải, Nguyễn Thị Vân Anh, invited lecturer	F+I	10/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	ENG1.012	English Academic Writing	3	36	36	0	0	M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, invited lecturers	F+I	12/2023	3/2024
12	ENG1.013	English Presentation	3	36	36	0	0	M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, invited lecturers	F+I	12/2023	3/2024
13	ENG1.014	English Listening & Note-taking	2	28	28	0	0	M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, invited lecturers	F+I	12/2023	3/2024
14	FR1.001	French double degree 1*	8	120	120			O	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	12/2023
Semester 2												
15	BIO1.002	Genetics	3	34	20	4	10	O	Nguyễn Thy Ngọc Lê Thị Vân Anh Nguyễn Thị Trang Huyền Nguyễn Cẩm Linh Nguyễn Quỳnh Hoa Trần Tuấn Anh	F+I	02/2024	6/2024
16	BIO1.003	Biochemistry	3	30	26	4		O	Lê Thị Thu Hằng, Nguyễn Phương Nga	F	02/2024	6/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
17	BIO1.004	General micro-biology	3	34	22	12		O	Shir-Ly Huang Suh-Der Tsen Trần Thị Thanh Tâm Trần Tuấn Anh Nguyễn Quang Huy Nguyễn Hồng Nhung Dương Thu Trang Lê Thị Dung Trần Huyền Linh Vũ Thị Hiền Đặng Thị Thùy Dương	F+I	02/2024	6/2024
18	CHE1.002	General Chemistry 2	4	40	26		14	O	Wim Dehaen Alfons Lê Phương Thu Nguyễn Thu Phương Nguyễn Thị Quyên	F+I	02/2024	6/2024
19	CHE1.003	Organic Chemistry	4	50	32		18	O	Nguyễn Văn Hùng Bùi Hữu Tài Nguyễn Xuân Nhiệm	I	02/2024	6/2024
20	CHE1.004	Practical chemistry	2	24		24		O	Nguyễn Ngọc Đức Trần Tuấn Anh Phạm Lê Anh Đào Thành Dương Lê Phương Thu Nguyễn Thu Phương Bùi Văn Hợi Lê Thị Hương Vũ Thị Trang Đàm Thế An Trần Quang Minh Nguyễn Danh Thiện Nguyễn Thị Quyên	F+I	02/2024	6/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
21	ICT1.002	Basic programming	4	40	28	12		M	Nguyễn Hoàng Hà Nguyễn Minh Hương Giang Anh Tuấn Lê Hữu Tôn Kiều Quốc Việt Tống Sĩ Sơn Huỳnh Vinh Nam	F	02/2024	6/2024
22	ICT1.003	Computer Architecture	3	36	26	10		O	Lê Anh Ngọc Lê Hữu Tôn Nguyễn Văn Công Phạm Văn Đại Nguyễn Khánh Tùng	F+I	02/2024	6/2024
23	ICT1.004	Introduction to Algorithm	3	30	22	8		O	Hoàng Đỗ Thanh Tùng Nguyễn Thị Phương Thảo Lê Hữu Tôn Nguyễn Xuân Thành Nguyễn Lê Dũng	F+I	02/2024	6/2024
24	MAT1.003	Calculus 2	3	36	24		12	O	Lê Hải Khôi Phạm Việt Hùng Lương Thái Hưng Đỗ Hoàng Sơn Nguyễn Huyền Mười	F+I	02/2024	6/2024
25	MAT1.004	Discrete Mathematics	3	36	18		18	O	Nguyễn Hoàng Thạch Phong Thị Thu Huyền Nguyễn Ngọc Minh Tâm Lê Hải Yến	I	02/2024	6/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
26	PHY1.002	Fundamental Physics 2	4	43	29		14	M	Hà Dương Tập Hoàng Thị Hồng Cẩm Nguyễn Thị Thanh Ngân Nguyễn Thị Ngọc Nguyễn Lương Lâm Nguyễn Mai Chung Trịnh Bích Ngọc Nguyễn Văn Quỳnh Đông Văn Thanh	F+I	02/2024	6/2024
27	PHY1.003	Electromagnetism	4	40	26		14	O	Nguyễn Quốc Hưng, Hoàng Thị Hồng Cẩm	F+I	02/2024	6/2024
28	PHY1.004	Practical physics	2	24		24		O	Nguyễn Hồng Nam Vũ Ngọc Linh Phạm Văn Nhất Nguyễn Lương Lâm Nguyễn Thị Ngọc Nguyễn Thị Thanh Ngân Nguyễn Mai Chung Trịnh Bích Ngọc Hoàng Thị Hồng Cẩm Phạm Lê Anh Nguyễn Xuân Trường Đông Văn Thanh	F+I	02/2024	6/2024
29	PHY1.005	Practical physics**	3	30		30		O	Phạm Văn Nhất, Nguyễn Lương Lâm	F+I	02/2024	6/2024
30	MAT2.001	Numerical methods	4	40	22	18		O	Thái Minh Quân Phạm Đức Bình Trần Anh Tú Nguyễn Lê Dũng Nguyễn Xuân Thành	F+I	02/2024	6/2024
31	PHA1.002	Physicochemistry 2	5	54	21	27	6	M	Nguyễn Hồng Vân, Nguyễn Phương Nhung	F+I	02/2024	6/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture hour	Practical hour	Tutorial hour	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
32	PHA1.006	Mycology and Parasitology	3	40	30	10		M	Nguyễn Quang Huy, Nicolas Papon	F+I	02/2024	6/2024
33	FR1.002	French double degree 2*	0	130	130			O	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	01/2024	4/2024
34	FR1.003	French double degree 3*	0	130	130			O	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	5/2024	7/2024
35	MS1.001	Foundation of Economics	2	20	20			O	Phạm Thị Mỹ Hạnh	I	02/2024	6/2024
36	MS1.002	Fundamentals of Law and Law on Science and Technology in Vietnam	2	20	20			O	Nguyễn Văn Hùng	I	02/2024	6/2024

(*): Modules for double degree programs.

(**): Modules for Mechatronics Engineering Technology and Automotive Engineering. JB

ANNEX 2: TEACHING PLAN OF BACHELOR PROGRAM IN ADVANCED MATERIALS SCIENCE AND NANOTECHNOLOGY

IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

2.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	EPE2.301	Mathematics for Physics	3	36	25		11	M	Phạm Tuấn Anh	I	9/2023	02/2024
2	AMS2.201	Electromagnetism 2	3	30	24		6	M	Nguyễn Thị Ngọc	F	9/2023	02/2024
3	AMS2.205	Solid-state physics	3	36	30		6	M	Vũ Thị Thu	F	9/2023	02/2024
4	AMS2.101	Inorganic Chemistry	3	30	20		10	M	Delphine Schamming	I	9/2023	02/2024
5	AMS3.105	Electrochemistry	3	34	24	10		M	Nguyễn Văn Quỳnh	F	9/2023	02/2024
6	AMS2.210	Statistical Mechanics	4	40	30		10	M	Trịnh Xuân Hoàng	I	9/2023	02/2024
7	AMS2.204	Optics	2	26	24		2	M	Nguyễn Thị Thanh Ngân	F	9/2023	02/2024
8	AMS2.102	Organic Chemistry 2	3	36	24	12		M	Lê Thị Hường	F	9/2023	02/2024
9	AMS2.208	Semiconductor	3	36	30		6	M	Nguyễn Thị Thanh Ngân	F	9/2023	02/2024
10	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
12	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
13	AMS2.103	Analytical Chemistry	3	36	24	12		M	Lê Thị Hường	F	02/2024	7/2024
14	AMS2.301	Fundamentals of Materials Science	3	36	30		6	M	Nguyễn Văn Quyền	F	02/2024	7/2024
15	AMS2.303	Introduction of micro-nano technology	2	20	12	8		M	Phạm Văn Nhật	F	02/2024	7/2024
16	AMS2.206	Physical Chemistry	3	30	20	10		M	Myriana Hémadi, Nguyễn Văn Quyền	F+I	02/2024	7/2024
17	AMS2.306	Micro and Nanofabrication	3	30	24	6		M	Nguyễn Văn Quỳnh	F	02/2024	7/2024
18	AMS2.304	Magnetism & Magnetic materials	3	30	24	6		M	Nguyễn Lương Lâm	F	02/2024	7/2024
19	AMS2.207	Colloid Chemistry and Soft Matter	3	33	23	10		M	Nguyễn Văn Quyền	F	02/2024	7/2024
20	AMS2.305	Materials Design and Simulation	3	30	12	18		M	Thái Minh Quân	I	02/2024	7/2024
21	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
22	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

2.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	CH2.016	Chemistry of Polymer	3	36	30	0	6	M	Nguyễn Đức Anh	F	9/2023	02/2024
2	AMS3.105	Electrochemistry	3	34	24	10		M	Nguyễn Văn Quỳnh	F	9/2023	02/2024
3	AMS3.107	Nanochemistry	3	36	24	6	6	M	Nguyễn Thị Quyên	F	9/2023	02/2024
4	AMS3.106	Inorganic Materials	3	30	24	6		M	Nguyễn Lương Lâm	F	9/2023	02/2024
5	AMS3.307	Materials Characterization Techniques 1	3	30	20	10		M	Nguyễn Văn Quỳnh	F	9/2023	02/2024
6	AMS3.308	Smart Hybrid Materials	3	30	26		4	M	Phạm Văn Nhất	F	9/2023	02/2024
7	AMS3.310	Materials Characterization Techniques 2	3	30	24	6		M	Nguyễn Lương Lâm, Nguyễn Thị Ngọc	F	9/2023	02/2024
8	AMS3.311	Engineering Practice	3	30	0	30		M	Invited lecturers	I	9/2023	02/2024
9	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
10	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
12	AMS3.990	Group Project	6					M			02/2024	7/2024
13	AMS3.999	Internship (3-6 months)	15					M			02/2024	7/2024
14	AMS3.209	Optoelectronics and Nanophotonics	3	32	28	4		O	Nguyễn Thị Thanh Ngân	F	02/2024	7/2024
15	AMS3.009	Plasma Physics and Applications	3	36	24	10	2	O	Đỗ Hoàng Tùng	I	02/2024	7/2024
16	AMS3.309	Materials for Environmental Applications	3	30	18	12		O	Nguyễn Văn Quyền	F	02/2024	7/2024
17	AMS3.001	Nanobiotechnology and BioMEMS	3	30	24	6		O	Phạm Văn Nhất, Nguyễn Xuân Phúc	F+I	02/2024	7/2024
18	AMS3.002	Biosensors	3	30	18	12		O	Vũ Thị Thu	F	02/2024	7/2024
19	AMS3.009	Plasmonic Enhanced Spectroscopy	3	30	20	6	4	O	Julien Laverdant	I	02/2024	7/2024
20	AMS3.004	Nanoelectronics	3	30	20		10	O	Nguyễn Trần Thuật	I	02/2024	7/2024
21	AMS3.005	Silicon Photonics	3	30	26	4		O	Hoàng Thị Hồng Cẩm	F	02/2024	7/2024
22	AMS3.006	Materials for Energy Conversion and Storage	3	36	28	8		O	Lê Thị Hương, Nguyễn Mai Chung	F	02/2024	7/2024
23	AMS3.007	Lasers	3	36	24	8	4	O	Nguyễn Thị Thanh Ngân, Tống Quang Công	F+I	02/2024	7/2024
24	AMS3.010	Industrial process for solar cell fabrication	3	30	22	8		O	Nguyễn Thị Lệ	I	02/2024	7/2024

ANNEX 3: TEACHING PLAN OF BACHELOR PROGRAM IN APPLIED MATHEMATICS IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

3.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.006	Computational Linear Algebra	4	40	20		20	M	Trần Giang Nam	I	9/2023	01/2024
2	MAT2.007	Probability	4	40	20		20	M	Phạm Việt Hùng	I	9/2023	01/2024
3	MAT2.008	Dynamical Systems	3	36	24		12	M	Đỗ Hoàng Sơn	I	9/2023	01/2024
4	MAT2.009	Graph Theory	4	40	20		20	M	Trần Giang Nam	I	9/2023	01/2024
5	MAT2.010	Optimization 1	3	36	18		18	M	Lê Xuân Thanh	I	9/2023	01/2024
6	ICT2.001	Algorithms and Data Structures	3	36	20	16		M	Đoàn Nhật Quang	F	9/2023	01/2024
7	ICT2.003	Object - oriented programming	4	40	30	10		M	Nghiêm Thị Phương Trần Giang Sơn Kiều Quốc Việt	F	9/2023	01/2024
8	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024

JB

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
9	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
10	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
11	MAT2.011	Statistics	4	40	20		20	M	Hồ Đăng Phúc	I	02/2024	7/2024
12	MAT2.012	Numerical Analysis	4	40	20		20	M	Nguyễn Quỳnh Nga	I	02/2024	7/2024
13	MAT2.013	Mathematical Modeling	4	40	20		20	M	Đoàn Thái Sơn	I	02/2024	7/2024
14	MAT2.014	Optimization 2	3	36	18		18	M	Lê Xuân Thanh	I	02/2024	7/2024
15	MAT2.015	Stochastic Processes	3	36	18		18	M	Cần Văn Hào	I	02/2024	7/2024
16	ICT2.010	Image Processing	3	36	27	9		M	Nghiêm Thị Phương	F	02/2024	7/2024
17	ICT2.013	Advanced programming with Python	4	40	30	10		M	Trần Giang Sơn	F	02/2024	7/2024
18	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
19	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

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3.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT3.001	Data Assimilation	4	40	20		20	M	Đoàn Thái Sơn	I	8/2023	01/2024
2	MAT3.002	Multivariate Statistics	4	40	20		20	M	Hồ Đăng Phúc	I	8/2023	01/2024
3	MAT3.003	Mathematical Finance	4	40	20		20	M	Nguyễn Hoàng Thạch	I	8/2023	01/2024
4	MAT3.004	Machine Learning: Optimization Approach	4	40	20		20	M	Lê Hải Yến	I	8/2023	01/2024
5	MAT3.005	Machine Learning: Statistical Approach	4	40	20		20	M	Cần Văn Hào	I	8/2023	01/2024
6	ICT3.013	Natural Language Processing	3	30	20	10		M	Phạm Quang Nhật Minh	I	8/2023	01/2024
7	ICT3.015	Computer Vision	3	30	20	10		M	Nguyễn Đức Dũng	I	8/2023	01/2024
8	MAT3.006	Group Project	5					M			8/2023	01/2024
9	FR3.001	French 3.1	4	66	66	0	0	M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
10	FR3.002	French 3.2	3	34	34	0	0	M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

JP

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
12	MS3.002	Startups	2	20	20	0	0	O	Trần Minh Thu	I	02/2024	7/2024
13	MAT3.007	Internship	20					M			4/2024	9/2024

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ANNEX 4: TEACHING PLAN OF BACHELOR PROGRAM IN CHEMISTRY IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

4.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	CH2.001	Analytical Chemistry	2	28				M	Christophe Pichon, Bùi Văn Hợi	F+I	9/2023	01/2024
2	CH2.002	Analytical Chemistry Lab	3	45	1	44		M	Bùi Văn Hợi, Lê Văn Hoàng	F+I	9/2023	01/2024
3	CH2.003	Inorganic Chemistry 1	2	24	18		6	M	Nguyễn Thị Quyên, Trần Bửu Đăng	F+I	9/2023	01/2024
4	CH2.004	Inorganic Chemistry 2	2	24	18		6	M	Nguyễn Thị Quyên, Gilles LeMercier	F+I	9/2023	01/2024
5	CH2.005	Instrumental Analysis 1	3	36	30		6	M	Tô Hải Tùng	F	9/2023	01/2024
6	CH2.006	Organic Chemistry 2	3	36	24		12	M	Nguyễn Đức Anh	F	9/2023	01/2024
7	CH2.007	Physical Chemistry 1	2	24	20		4	M	Nguyễn Thị Tuyết Mai, Trần Bửu Đăng	F+I	9/2023	01/2024
8	CH2.008	Physical Chemistry 2	2	24	18		6	M	Ha Vinh Lam Nguyen, Trần Bửu Đăng	I	9/2023	01/2024
9	CH2.009	Project-based course 1	3	36	24	12		M	Lê Thị Lý, Lê Văn Hoàng	F+I	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
11	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
12	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
13	CH3.003	Biochemistry and Bioinorganic Chemistry	3	36	30	6		M	Phạm Hồng Ngọc	F	02/2024	7/2024
14	CH2.012	Instrumental Analysis 2	3	36	24		12	M	Lê Thị Lý	F	02/2024	7/2024
15	CH2.013	Organic Chemistry Lab	3	45	5	40		M	Tô Hải Tùng, Phạm Hồng Ngọc, Nguyễn Đức Anh, Vũ Thị Trang	F+I	02/2024	7/2024
16	CH2.014	Organic Synthesis	3	36	30			M	Tô Hải Tùng, Albert Nguyen Van Nhien	F+I	02/2024	7/2024
17	AMS2.015	Physico -Chemistry of Interfaces	3	30				M	Vũ Thị Thu	F	02/2024	7/2024
18	CH2.016	Polymer Chemistry	3	36	30		6	M	Nguyễn Đức Anh	F	02/2024	7/2024
19	CH2.017	Project-based course 2	3	36	6	30		M	Lê Thị Lý, Nguyễn Thị Quyên, Nguyễn Ngọc Đức	F	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
20	CH3.006	Structure Determination	3	36	24		12	M	Tô Hải Tùng	F	02/2024	7/2024
21	CH2.019	Inorganic Chemistry Labwork	2	30		30		M	Nguyễn Thị Quyên, Phạm Hồng Ngọc	F	02/2024	7/2024
22	CH2.020	Physical Chemistry Labwork	2	30		30		M	Nguyễn Ngọc Đức, Trần Bửu Đăng	F+I	02/2024	7/2024
23	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
24	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

4.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	CH3.001	Chemistry of Nanomaterials	3	36	30		6	M	Nguyễn Thị Quyên	F	8/2023	02/2024
2	CH3.002	Electrochemistry	3	36	24	12		M	Nguyễn Ngọc Đức, EYRAUD Marielle	F+I	8/2023	02/2024
3	CH3.003	Biochemistry and Bioinorganic Chemistry	3	36	30	6		M	Phạm Hồng Ngọc	F	8/2023	02/2024
4	CH3.016	Chemistry of Natural and Biodegradable Polymers	2	24	24			M	Nguyễn Đức Anh	F	8/2023	02/2024
5	CH3.017	Chemistry of Natural products: Bioactive Compounds	2	24	24			M	Tô Hải Tùng	F	8/2023	02/2024
6	CH3.018	Catalysis	2	24	24			M	Nguyễn Ngọc Đức	F	8/2023	02/2024
7	CH3.007	Chemistry of Materials in Energy Conversion and Storage 1	3	36	30		6	M	Lê Thị Lý, Philippe Knauth	F+I	8/2023	02/2024
8	CH3.008	Chemistry of Materials in Energy Conversion and Storage 2	3	36	30		6	M	Nguyễn Ngọc Đức	F	8/2023	02/2024
9	CH3.009	Chemistry of Heterocyclic Compounds	2	24	24			M	Tô Hải Tùng	F	8/2023	02/2024
10	CH3.019	Chemistry of Surfactants and Formulation of Life Products	2	24	24			M	Nguyễn Đức Anh	F	8/2023	02/2024
11	CH2.018	Solid State Chemistry	2	24	24			M	Lê Thị Lý, Virginie Viallet	F+I	8/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	CH3.011	Project-based course 3	2	24		24		O	Lê Thị Lý, Nguyễn Ngọc Đức, Nguyễn Thị Quyên	F	8/2023	03/2024
13	CH3.013	Green Chemistry	2	24	20		4	M	Phạm Hồng Ngọc	F	8/2023	02/2024
14	CH3.014	Materials Chemistry Labwork	3	45	5	40		M	Nguyễn Ngọc Đức, Nguyễn Thị Quyên, Lê Văn Hoàng	F+I	8/2023	02/2024
15	CH3.015	Natural Products Labwork	2	30		30		M	Nguyễn Đức Anh, Tô Hải Tùng	F	8/2023	02/2024
16	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
17	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
18	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
19	FST3.015	Functional Food	2	24	17	7		O	Lê Thanh Hương	F	02/2024	07/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
20	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
21	CH3.020	Internship	15					M			04/2024	09/2024



ANNEX 5: TEACHING PLAN OF BACHELOR PROGRAM IN CYBER SECURITY IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

5.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	8/2023	12/2023
2	MAT2.002	Probability and Statistics	4	40	20		20	M	Trần Hoàng Tùng, Nguyễn Mai Chung, Nguyễn Minh Hương, Hoàng Phi Dũng	F+I	8/2023	12/2023
3	ICT2.001	Data Structures and Algorithms	3	36	20	16		M	Đoàn Nhật Quang, Nguyễn Minh Hương, Lê Hữu Tôn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
4	ICT2.003	Object-Oriented Programming	4	40	30	10		M	Nghiêm Thị Phương, Trần Giang Sơn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
5	ICT2.004	Signal and Systems	3	36	30		6	M	Trần Hoàng Tùng, Trần Đức Tân	F+I	9/2023	01/2024
6	ICT2.005	Fundamentals of databases	3	36	27	9		M	Nguyễn Hoàng Hà, Nguyễn Cẩm Linh, Huỳnh Vinh Nam, Kiều Quốc Việt	F	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
7	ICT2.013	Advanced Programming with Python	4	40	30	10		M	Trần Giang Sơn, Nguyễn Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
8	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
9	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
10	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
11	ICT2.008	Operating Systems	4	40	30		10	M	Daniel Hagimont, Huỳnh Vinh Nam, Kiều Quốc Việt, Đỗ Oanh Cường	F+I	01/2024	4/2024
12	CS2.001	Advanced Computer Architecture and x86 ISA	4	40	24	16		M	Daniel Chillet	I	01/2024	4/2024
13	ICT2.006	Computer Networks	4	40	30	10		M	Giang Anh Tuấn, Lương Trung Kiên	F+I	01/2024	4/2024
14	ICT3.001	Introduction to Cryptography	3	30	24		6	M	Nguyễn Minh Hương, Đoàn Nhật Quang, Giang Anh Tuấn	F	01/2024	3/2024
15	CS2.003	Law of Cyberspace and Ethics	4	40	28		12	M	Đỗ Trung Dũng	I	02/2024	6/2024
16	CS2.002	Network Programming	4	40	24	16		M	Giang Anh Tuấn	F	02/2024	6/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
17	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
18	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024
19	ICT2.011	Mobile Wireless Communication	3	30	20		10	O	Nguyễn Minh Hương	F	3/2024	5/2024
20	ICT3.014	Network Simulation	3	30	20	10		O	Nguyễn Minh Hương, Nguyễn Hoàng Hà	F	01/2024	3/2024

5.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	CS3.002	Digital Forensics	4	40	24	16		M	Trần Nguyên Ngọc, Phạm Trường Sơn	I	8/2023	12/2023
2	CS3.003	Intrusion Detection and Prevention System	4	40	24	16		M	Phạm Thanh Giang	I	8/2023	12/2023
3	CS3.005	Malware Analysis	4	40	24	16		M	Phạm Duy Trung	I	9/2023	01/2024
4	CS3.006	Administration of Computer Systems	3	30	20	10		M	Phạm Duy Trung	I	9/2023	01/2024
5	ICT3.005	Web application development	4	40	30	10		M	Nghiêm Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
6	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
7	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
8	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
9	ICT2.009	Software Engineering	3	36	26		10	O	Lê Minh Đức, Nguyễn Chí Cường, Đỗ Oanh Cường, Nguyễn Văn Công	I	9/2023	02/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	ICT3.012	Distributed Systems	3	30	20	10		O	Astsatryan Hrach	I	9/2023	02/2024
Semester 2												
11	CS3.001	Cloud Security and Privacy	4	40	24	16		M	Phạm Duy Trung	I	01/2024	3/2024
12	CS3.007	Data Integrity and Disaster Recovery	3	30	20	10		M	Lê Anh Ngọc	I	01/2024	3/2024
13	CS3.008	Web security	4	40	24	16		M	Hoàng Xuân Dậu	I	01/2024	3/2024
14	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
15	GP3.001	Group Project	3					M				
16	IN3.002	Internship	15					M				

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ANNEX 6: TEACHING PLAN OF BACHELOR PROGRAM IN ELECTRICAL ENGINEERING AND RENEWABLE ENERGY IN 2023-2024

(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

6.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.001	Numerical methods	3	36	21		15	M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	8/2023	01/2024
2	SA2.014	Probability and Statistics	4	40	20		20	M	Nguyễn Lê Dũng, Nguyễn Quốc Sơn, Phạm Lê Anh	F	8/2023	01/2024
3	EER2.003	Fluid Mechanics	3	42	30	12		M	Bùi Văn Tuấn	F	8/2023	01/2024
4	EER2.004	Thermodynamics 2	3	30	24	6		M	Nguyễn Hoàng Nam, Nguyễn Hồng Nam	F+I	8/2023	01/2024
5	EER2.005	Electrical circuit 1	4	50	30	12	8	M	Nguyễn Xuân Trường	F	8/2023	01/2024
6	EER2.006	Conversion of Energy	3	37	22	10	5	M	Nguyễn Xuân Trường, Nguyễn Hồng Nam	F	8/2023	01/2024
8	AMS3.006	Materials for energy	3	36	28	8		M	Lê Thị Hường, Nguyễn Mai Chung	F	8/2023	01/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
7	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
9	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
10	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
11	EER2.008	Applied Informatics in Electric and Energy Systems	2	24	12	12		M	Dương Việt Anh	F	02/2024	6/2024
12	EER2.009	Electrical circuits 2	4	50	30	14	6	M	Nguyễn Xuân Trường	F	02/2024	6/2024
13	EER2.010	Electrical energy storage	4	40	31	4	5	M	Hoàng Trung Kiên, Lê Thị Lý	F	02/2024	6/2024
14	EER2.011	Electronics	4	40	30	10		M	Nguyễn Trần Thuật, Nguyễn Xuân Trường	F+I	02/2024	6/2024
15	EER2.012	Heat and mass transfer	4	50	38.5	6	5.5	M	Nguyễn Ngọc Hoàng	I	02/2024	6/2024
16	EER2.013	Product design 1	3	40	16	24		M	Thái Minh Quân	I	02/2024	6/2024
17	EER2.014	Sensors and Analytical devices	4	40	25	15		M	Dương Việt Anh, Phạm Xuân Tùng	F	02/2024	6/2024
18	EER2.015	Signal processing	2	30	25	2	3	M	Phan Anh Tuấn	F	02/2024	6/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
19	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
20	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

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6.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	EER3.003	Electric transmission and distribution	3	30	20		10	M	Trần Thanh Sơn	I	8/2023	01/2024
2	EER3.001	Control engineering	3	44	28	9	7	M	Phan Anh Tuấn	F	8/2023	01/2024
3	EER3.002	Electrical machines	4	45	28	9	8	M	Hoàng Trung Kiên	F	8/2023	01/2024
4	EER3.004	Photovoltaic systems	4	48	30	12	6	M	Nguyễn Xuân Trường	F	8/2023	01/2024
5	EER3.005	Power electronics and applications	4	46	26	11	9	M	Hoàng Trung Kiên	F	8/2023	01/2024
6	EER3.006	Product design 2	3	40	16	24		M	Thái Minh Quân	I	8/2023	01/2024
7	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
8	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
9	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 2												
10	EER3.014	Group project	3					M			02/2024	6/2024
11	EER3.007	Biomass & Biofuels	4	45	30	15		M	Nguyễn Hồng Nam	F	01/2024	3/2024
12	EER3.008	Energy economics and markets	2	20	20			M	Nguyễn Hoàng Lan	I	01/2024	3/2024
13	EER3.009	Smart-grid technology	4	40	20	10	10	M	Hoàng Trung Kiên, Phan Anh Tuấn	F	01/2024	3/2024
14	EER3.010	Hydroelectric power	4	40	20	20		M	Lê Ngọc Thạch	I	01/2024	3/2024
15	EER3.013	Wind power	4	45	27	12	6	M	Hoàng Trung Kiên	F	01/2024	3/2024
16	EER3.018	Geothermal energy	4	48	24	14	10	O	Lại Hợp Phòng	I	01/2024	3/2024
17	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
18	EER3.015	Internship	9					M			4/2024	7/2024

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ANNEX 7: TEACHING PLAN OF BACHELOR PROGRAM IN ENGINEERING PHYSICS AND ELECTRONICS IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

7.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	EPE2.301	Mathematics for Physics	3	36	25		11	M	Phạm Tuấn Anh	I	9/2023	02/2024
2	AMS2.205	Solid-state physics	3	36	30		6	M	Vũ Thị Thu	F	9/2023	02/2024
3	AMS2.201	Electromagnetism 2	3	30	24		6	M	Nguyễn Thị Ngọc	F	9/2023	02/2024
4	ATE2.006	Electrical Engineering	3	45	24	9	12	M	Hoàng Trung Kiên	F	9/2023	02/2024
5	AMS2.210	Statistical Mechanics	4	40	30		10	M	Trịnh Xuân Hoàng	I	9/2023	02/2024
6	AMS2.204	Optics	2	26	24		2	M	Nguyễn Thị Thanh Ngân	F	9/2023	02/2024
7	EPE2.402	Integrated Computing	3	34	26	8		M	Nguyễn Thị Ngọc	F	9/2023	02/2024
8	AMS2.208	Semiconductor	3	36	30		6	M	Nguyễn Thị Thanh Ngân	F	9/2023	02/2024
9	AMS2.202	Quantum Mechanics	3	30	24		6	M	Hoàng Thị Hồng Cẩm	F	9/2023	02/2024
10	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
11	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
13	EPE2.205	Electronic Devices	3	32	24	8		M	Nguyễn Văn Quyền	F	02/2024	7/2024
14	EPE2.201	Analog Electronics	3	40	30	10		M	Trịnh Quang Kiên Trần Thị Hồng Thắm	I	02/2024	7/2024
15	EPE2.202	Digital Electronics	3	30	24	6		M	Trịnh Quang Kiên Trần Thị Hồng Thắm	I	02/2024	7/2024
16	EPE2.107	Simulations for Physics	3	35	20	15		M	Nguyễn Tùng Anh	I	02/2024	7/2024
17	EPE2.108	Sensing technology	3	30	24	2	4	M	Nguyễn Văn Trung	I	02/2024	7/2024
18	EPE3.201	Microprocessor and Microcontroller	3	35	25	10		M	Phạm Xuân Tùng	F	02/2024	7/2024
19	EPE2.203	Practical Electronics 1	2.5	25		25		M	Nguyễn Văn Quỳnh, Đinh Văn Tuấn	F+I	02/2024	7/2024
20	EPE2.204	Practical Electronics 2	2.5	25		25		M	Nguyễn Văn Quỳnh, Đinh Văn Tuấn	F+I	02/2024	7/2024
21	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
22	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

7.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	EPE3.506	Practical on microprocessor and microcontroller	4	40		40		M	Đình Văn Tuấn	I	9/2023	02/2024
2	EPE3.103	Measurement technology	3	30	24	6		M	Nguyễn Lương Lâm	F	9/2023	02/2024
3	EPE3.104	Analog integrated microsystem design	3	36	22	7	7	M	Nguyễn Văn Trung	I	9/2023	02/2024
4	EPE3.202	Digital integrated microsystem design	3	32	12	20		M	Hàn Huy Dũng	I	9/2023	02/2024
5	AMS3.007	Lasers	3	36	24	8	4	M	Nguyễn Thị Thanh Ngân, Tống Quang Công	F+I	9/2023	02/2024
6	AMS3.004	Nanoelectronics	3	30	20		10	M	Nguyễn Trần Thuật	I	9/2023	02/2024
7	EPE3.203	Embedded system	3	35	10	25		M	Phạm Xuân Tùng	F	9/2023	02/2024
8	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
9	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
11	EPE3.990	Group project	6					M			02/2024	7/2024
12	EPE3.999	Internship	15					M			02/2024	7/2024
13	AMS3.010	Industrial process for solar cell fabrication	2	30	20	5	5	M	Nguyễn Thị Lệ	I	02/2024	7/2024
14	AMS3.009	Plasma Physics and Applications	3	36	24	10	2	O	Đỗ Hoàng Tùng	I	02/2024	7/2024
15	AMS2.306	Micro and Nanofabrication	3	30	24	6		O	Nguyễn Văn Quỳnh	F	02/2024	7/2024
16	EPE3.503	Materials for energy conversion and storage	3	36	28	8		O	Lê Thị Hương, Nguyễn Mai Chung	F	02/2024	7/2024
17	AMS3.209	Optoelectronics and nanophotonics	3	32	28	4		O	Nguyễn Thị Thanh Ngân	F	02/2024	7/2024
18	EPE3.600	Application Programming	3	32	16	16		O	Invited lecturer	I	02/2024	7/2024
19	EPE3.601	Industrial Communication Network and IoT	3	36	16	20		O	Invited lecturer	I	02/2024	7/2024
20	AMS3.005	Silicon Photonics	3	30	26	4		O	Hoàng Thị Hồng Cẩm	F	02/2024	7/2024
21	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024

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ANNEX 8: TEACHING PLAN OF BACHELOR PROGRAM IN FOOD SCIENCE AND TECHNOLOGY IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

8.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	FST2.004	Introduction to food science and technology	3	36	27	9	0	M	Tô Thị Mai Hương, Phạm Hoàng Nam	F	9/2023	02/2024
2	FST2.007	Nutrition metabolism	3	42	30	10	2	M	Lê Trần Bình	I	9/2023	02/2024
3	FST2.008	Food physics	3	30	24	6	0	M	Nguyễn Tiến Cường, Phạm Hoàng Nam	F+I	9/2023	02/2024
4	FST2.009	Food microbiology	3	42	30	12	0	M	Phạm Hoàng Nam, Nguyễn Thị Trang Huyền	F	9/2023	02/2024
5	FST2.010	Food enzymology	3	30	21	6	3	M	Nguyễn Sỹ Lê Thanh	I	9/2023	02/2024
6	FST2.017	Food legislation and regulation	3	30	30	0	0	M	Đào Thế Anh	I	9/2023	02/2024
7	FST2.006	Food chemistry	3	45	28	11	6	M	Lê Hồng Luyến, Trần Tuấn Anh	F	9/2023	02/2024
8	FST2.012	Process and equipment in food technology 1	3	30	21	9	0	M	Karthikeyan Venkatachalam	I	9/2023	02/2024
9	FST2.019	Environmental safety in food industry	2	28	20	8	0	M	Mai Thị Phương Nga	F	9/2023	02/2024
10	BIT2.001	Molecular Biology	2	20	16	4	0	O	Mai Thị Phương Nga	F	9/2023	02/2024
11	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
13	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
14	FST2.011	Food toxicology	3	30	30	0	0	M	Lê Thanh Hương, Phillipe Pinton	F	02/2023	7/2024
15	FST2.005	Biostatistic	3	33	24	0	9	M	Nguyễn Thị Vân Anh	F	02/2024	7/2024
16	FST2.023	Practical in Food chemistry	2	30	0	30	0	M	Bùi Quang Minh	I	02/2024	7/2024
17	FST2.014	Food microbiological analysis	3	30	18	12	0	M	Phạm Hoàng Nam, Nguyễn Văn Phụng	F	02/2024	7/2024
18	FST2.015	Food safety and sanitation	2	30	30	0	0	M	Karthikeyan Venkatachalam	I	02/2024	7/2024
19	FST2.016	Preservation technology	3	30	30	0	0	M	Hồ Phú Hà	I	02/2024	7/2024
20	FST2.018	Process and equipment in food technology 2	4	45	30	15	0	M	Đỗ Xuân Trường	I	02/2024	7/2024
21	FST2.020	Introduction to Ecological Agriculture	2	30	20	8	2	M	Nguyễn Văn Phụng, Phạm Hoàng Nam	F	02/2024	7/2024
22	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
23	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
24	FST2.024	Compositional food analysis	2	30	18	12	0	O	Bùi Văn Hợi	F	02/2024	7/2024
25	AES2.019	Environment and public health	2	24	24	0	0	O	Phạm Lê Anh	F	02/2024	7/2024
26	BIT2.019	Basics on Phytomedicine and Natural Product Drugs	2	30	20	10	0	O	Lê Hồng Luyến	F	02/2024	07/2024

8.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	FST3.001	Group Project	3					M			09/2023	02/2024
2	FST3.002	Refrigeration technology	3	30	27		3	M	Nguyễn Ngọc Hoàng	I	09/2023	02/2024
3	FST3.003	Package technology	3	30	30			M	Nguyễn Ngọc Hoàng	I	09/2023	02/2024
4	FST3.004	Food formulation technology	3	30	25		5	M	Huỳnh Tiến Đạt	I	02/2024	07/2024
5	FST3.005	Sensory evaluation of food products	2	20	20			M	Từ Việt Phú	I	09/2023	02/2024
6	FST3.010	Beverage technology	2	20	20			M	Nguyễn Tiến Thành	I	09/2023	02/2024
7	FST3.011	Aroma and food additives	2	20	18		2	M	Vũ Thị Minh Hằng	I	09/2023	02/2024
8	FST3.013	Food quality management	3	30	20		10	M	Nguyễn Thị Minh Tú, Nguyễn Thị Thảo	I	09/2023	02/2024
9	FST3.012	Seafood technology	2	30	30			M	Nguyễn Văn Minh	I	09/2023	02/2024
10	FST3.016	Technology of tea, cocoa and coffee	2	30	27	3		O	Nguyễn Văn Tặng	I	09/2023	02/2024
11	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
13	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
14	FST3.008	Tropical fruit and vegetable technology	3	30	20	6	4	M	Võ Đình Lệ Tâm	I	02/2023	07/2024
15	FST3.006	Practice on food technology	3	32	0	32	0	M	Phạm Hoàng Nam, Nguyễn Phương Nga	F	02/2024	07/2024
16	FST3.007	Meat technology	2	20	20	0	0	M	Lê Trung Thiên, Gorgia Spigno	I	02/2024	07/2024
17	FST3.009	Dairy technology	2	30	30	0	0	M	Lê Trung Thiên, Eugenio Aprea	I	02/2024	07/2024
18	FST3.015	Functional Food	2	24	17	7	0	M	Lê Thanh Hương	F	02/2024	07/2024
19	FST3.014	Post harvest Science and technology	2	30	30	0	0	O	Karthikeyan Venkatachalam	I	02/2024	07/2024
20	FST3.021	Food fat and oil processing technology	2	30	30	0	0	O	Võ Đình Lệ Tâm	I	02/2024	07/2024
21	FST3.018	Statistical analysis applied in Food Technology	2	30	10	0	20	O	Trần Văn Hùng, Trần Thị Thanh Tâm	F+I	02/2024	07/2024
22	FST3.019	Basic of Food Factory design	2	30	20	10	0	O	Nguyễn Tiến Thành, Lê Tuấn	I	02/2024	07/2024
23	FST3.022	Waste water treatment in food industry	2	24	16	8	0	O	Đào Thành Dương	F	02/2024	07/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
24	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
25	FST3.020	Internship	12					M			02/2024	7/2024

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ANNEX 9: TEACHING PLAN OF BACHELOR PROGRAM IN INFORMATION AND COMMUNICATION TECHNOLOGY IN 2023-2024

(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

9.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	8/2023	12/2023
2	MAT2.002	Probability and Statistics	4	40	20		20	M	Trần Hoàng Tùng, Nguyễn Mai Chung, Nguyễn Minh Hương, Hoàng Phi Dũng	F+I	8/2023	12/2023
3	ICT2.001	Data Structures and Algorithms	3	36	20	16		M	Đoàn Nhật Quang, Nguyễn Minh Hương, Lê Hữu Tôn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
4	ICT2.003	Object-Oriented Programming	4	40	30	10		M	Nguyễn Thị Phương, Trần Giang Sơn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
5	ICT2.004	Signal and Systems	3	36	30		6	M	Trần Hoàng Tùng, Trần Đức Tân	F+I	9/2023	01/2024
6	ICT2.005	Fundamentals of databases	3	36	27	9		M	Nguyễn Hoàng Hà, Nguyễn Cẩm Linh, Huỳnh Vinh Nam, Kiều Quốc Việt	F	3/2023	5/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
7	ICT2.013	Advanced Programming with Python	4	40	30	10		M	Trần Giang Sơn, Nghiêm Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
8	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
9	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
10	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
11	ICT2.008	Operating Systems	4	40	30		10	M	Daniel Hagimont, Huỳnh Vinh Nam, Kiều Quốc Việt, Đỗ Oanh Cường	F+I	01/2024	4/2024
12	MAT2.004	Algebraic Structures	3	36	20		16	M	Đoàn Nhật Quang	F	01/2024	4/2024
13	ICT2.006	Computer Networks	4	40	30	10		M	Giang Anh Tuấn, Lương Trung Kiên	F+I	01/2024	4/2024
14	ICT2.009	Software Engineering	3	36	26		10	M	Lê Minh Đức, Nguyễn Chí Cường, Đỗ Oanh Cường, Nguyễn Văn Công	I	3/2024	5/2024
15	MAT2.005	Computational theory	3	36	30		6	M	Giang Anh Tuấn, Lương Trung Kiên	F+I	8/2023	12/2023
16	ICT2.007	Digital Signal Processing	3	36	30		6	M	Trần Đức Tân, Lâm Sinh Công, Nguyễn Phương Anh	I	3/2024	5/2024
17	ICT3.002	Machine Learning and Data Mining 1	3	30	21	9		M	Lê Hữu Tôn, Đoàn Nhật Quang	F	3/2024	5/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
18	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
19	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024
20	ICT2.010	Image Processing	3	36	27	9		O	Trần Giang Sơn, Nghiêm Thi Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	3/2024	5/2024
21	ICT2.011	Mobile Wireless Communication	3	30	20		10	O	Nguyễn Minh Hương	F	3/2024	5/2024
22	ICT2.012	Software Testing and Quality Assurance	3	30	20	10		O	Kristina Sargsyan	I	1/2024	4/2024

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9.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	ICT3.002	Machine Learning and Data Mining 1	3	30	21	9		M	Lê Hữu Tôn, Đoàn Nhật Quang	F	9/2023	02/2024
2	ICT3.003	Mobile Application Development	4	40	30	10		M	Trần Giang Sơn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
3	ICT3.004	Object-Oriented System Analysis and Design	4	40	28		12	M	Đỗ Trung Dũng	I	8/2023	12/2023
4	ICT3.005	Web application development	4	40	30	10		M	Nghiêm Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
5	ICT3.017	Introduction to Deep Learning	3	36	27	9		M	Trần Giang Sơn, Nghiêm Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	12/2023
6	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
7	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
8	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
9	ICT3.006	Advanced databases	3	31	21	10		O	Lê Hồng Hải	I	9/2023	02/2024
10	ICT3.012	Distributed Systems	3	30	20	10		O	Astsatryan Hrach	I	9/2023	02/2024
Semester 2												
11	ICT3.001	Introduction to Cryptography	3	30	24		6	M	Nguyễn Minh Hương, Đoàn Nhật Quang, Giang Anh Tuấn	F	01/2024	3/2024
12	ICT3.008	Computer Graphics	3	36	30		6	M	Nguyễn Hoàng Hà, Huỳnh Vinh Nam	F	01/2024	3/2024
13	ICT3.009	Graph Theory	3	36	31		5	M	Emmanuel Viennet	I	01/2024	3/2024
14	ICT3.011	Machine Learning and Data Mining 2	3	36	20	16		M	Đoàn Nhật Quang, Lê Hữu Tôn, Huỳnh Vinh Nam	F	01/2024	3/2024
15	ICT3.013	Natural Language Processing	3	30	20	10		O	Phạm Quang Nhật Minh	I	01/2024	3/2024
16	ICT3.014	Network Simulation	3	30	20	10		O	Nguyễn Minh Hương, Nguyễn Hoàng Hà	F	01/2024	3/2024
17	ICT3.015	Computer Vision	3	30	20	10		O	Nguyễn Đức Dũng	I	01/2024	3/2024
18	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
19	GP3.001	Group Project	3					M				
20	IN3.001	Internship	12					M				

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ANNEX 10: TEACHING PLAN OF BACHELOR PROGRAM IN MEDICAL SCIENCE AND TECHNOLOGY IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

10.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MST2.001	Human Anatomy and Physiology	4	51	36	15	0	M	Cần Văn Mão, Lê Văn Quân	I	9/2023	02/2024
2	MST2.002	Advanced Cell Biology	3	40	24	8	8	M	Mai Thị Phương Nga, Nguyễn Thị Trang Huyền	F	9/2023	02/2024
3	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
4	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
5	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Biomedical Sciences (BMS)												
6	BIT2.001	Molecular Biology	4	48	40	8	0	M	Mai Thị Phương Nga, Trần Thị Thanh Tâm	F	9/2023	02/2024
7	BIT2.002	Biochemistry 2	4	40	32	8	0	M	Lê Thị Thu Hằng, Nguyễn Phương Nga	F	9/2023	02/2024
8	BIT2.003	Bioanalytical chemistry	3	30	19	4	7	M	Nguyễn Thị Kiều Oanh; Lê Hồng Luyến	F	9/2023	02/2024
9	BIT3.004	Bioinformatics	3	35	35	0	0	M	Trần Thị Thanh Tâm, Phạm Thế Hải	F	9/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	MST2.005	Medical Mycology and Parasitology	3	40	30	10	0	M	Nicolas Papon; Nguyễn Quang Huy	F+I	9/2023	02/2024
11	MST2.006	Medical Bacteriology	3	36	24	12	0	M	Nguyễn Quang Huy, Bùi Tiến Sỹ, Trần Sơn Hoàng	F + I	9/2023	02/2024
12	MST2.007	Medical virology	3	40	28	6	6	M	Nguyễn Thị Thường	I	9/2023	02/2024
Biomedical Engineering (BME)												
13	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	9/2023	02/2024
14	MST2.011	Signals and Systems	3	36	21	9	6	M	Phan Anh Tuấn	F	9/2023	02/2024
15	ICT2.001	Data Structures and Algorithms	3	36	20	16		M	Đoàn Nhật Quang, Nguyễn Minh Hương, Lê Hữu Tôn, Kiều Quốc Việt, Huỳnh Vinh Nam	F+I	9/2023	02/2024
16	MST2.012	Biomolecules and Cellular Engineering	4	44	36	8	0	M	Lê Thị Thu Hằng, Nguyễn Phương Nga	F	9/2023	02/2024
17	MST2.013	Medical Physics	3	40	30	15	0	M	Trần Anh Quang	I	9/2023	02/2024
Semester 2												
18	MST2.003	Histology and Cytology	3	45	30	15	0	M	Nguyễn Phương Nga, Nguyễn Thị Trang Huyền	F	02/2024	7/2024
19	MST2.004	Human pathophysiology	3	33	27	6	0	M	Cán Văn Mão, Lê Văn Quân	I	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
20	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
21	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024
Biomedical Sciences (BMS)												
22	BIT2.008	Principles of Immunology	4	40	32	0	8	M	Trần Thị Thu Phương	I	02/2024	7/2024
23	MST2.009	Hematology	4	40	30	4	6	M	Marine CAQUOT, Nguyễn Quang Huy	F+I	02/2024	7/2024
24	BIT2.011	Introduction to Animal Cell Biotechnology	3	30	21	9	0	M	Nguyễn Thị Trang Huyền Lê Thanh Hương, Trần Thị Thu Phương	F	02/2024	7/2024
25	BIT2.004	Biostatistics	3	33	24	0	9	M	Nguyễn Thị Vân Anh	F	02/2024	7/2024
Biomedical Engineering (BME)												
26	MST2.014	Electronics	3	40	30	10	0	M	Trịnh Quang Kiên, Trần Thị Hồng Thắm	I	02/2024	7/2024
27	MST2.015	Digital Electronics	3	40	30	10	0	M	Trịnh Quang Kiên, Trần Thị Hồng Thắm	I	02/2024	7/2024
28	MST2.016	Biomedical Signals and electronic Circuits	4	60	30	30	0	M	Chuan Li, Nguyễn Trọng Tuyển	I	02/2024	7/2024
29	MST2.017	Physiological Signal Processing	3	36	20	16	0	M	Trần Quang Hưng, Ferial Terki	I	02/2024	7/2024
30	MST2.018	Introduction to Medical Imaging	3	30	30	0	0	M	Phạm Thị Thu Hiền	I	02/2024	7/2024
31	MST2.020	Practical in Biomedical Engineering	2	30	0	30	0	M	Nguyễn Trọng Tuyển	I	02/2024	7/2024
32	MST3.014	Medical Instrumentations	3	120	40	80	0	M	Viet Duc College of Medical Equipment Engineering	I	02/2024	7/2024

10.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MST3.023	Group Project	3					M			9/2023	02/2024
2	MST3.001	Biomedical materials	2	30	24	6	0	M	Nguyễn Đức Anh	F	9/2023	02/2024
3	MST3.003	Biomedical nanotechnology	3	45	30	15	0	M	Phạm Văn Nhất, Nguyễn Hồng Vân	F	9/2023	02/2024
4	MST3.004	Biosensors and Applications	3	30	18	12	0	M	Vũ Thị Thu	F	9/2023	02/2024
5	MST3.002	Tissue engineering	3	30	24	6	0	M	Nguyễn Thành Dương	I	9/2023	02/2024
6	MST3.005	Medical ethics	2	20	20	0	0	M	Nguyễn Đức Thuận	I	9/2023	02/2024
7	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
8	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
9	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Biomedical Sciences (BMS)												
10	BIT3.006	Introduction to Medical Biotechnology	3	35	21	14	0	M	Nguyễn Quang Huy, Lê Thị Thu Hằng, Đào Thị Mai Lan	F	9/2023	02/2024
11	BIT3.007	Protein Engineering	3	40	32	8	0	O	Mai Thị Phương Nga, Lê Thị Thu Hằng	F	9/2023	02/2024
12	MST3.007	Human Pathology	2	30	30	0	0	M	Nguyễn Văn Đô	I	9/2023	02/2024
13	MST2.021	Human Genetic and Diseases	3	36	24	12	0	M	Nguyễn Thùy Dương	I	9/2023	02/2024
Biomedical Engineering (BME)												
14	MST3.013	Microprocessor system	3	36	30	6	0	M	Phạm Xuân Tùng	F	9/2023	02/2024
15	MST2.019	Medical Image Processing	3	30	30	0	0	M	Nghiêm Thị Phương	F	9/2023	02/2024
16	MST3.016	Programing with Python	2	30	30	0	0	M	Nguyễn Cẩm Linh	F	9/2023	02/2024
Semester 2												
17	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
18	BIT3.013	Introduction to Neuron Science	2	20	20	0	0	M	Witchuda Saengsawang	I	02/2024	3/2024
19	MST3.025	Internship	12					M			5/2024	10/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Biomedical Sciences (BMS)												
20	BIT3.005	Introduction to Stem Cell	3	40	27	13	0	M	Romain Fontaine, invited lecturers	I	02/2024	3/2024
21	MST3.008	Cancer Biology and Diagnostics	4	55	36	15	4	M	Nguyễn Phương Nga, Nguyễn Thị Trang Huyền	F	02/2024	3/2024
22	MST3.009	Molecular Markers for Diagnostics	3	30	24	6	0	O	Nguyễn Văn Đô, Nguyễn Quang Huy	F+I	02/2024	3/2024
23	MST3.010	Omics and Computational Biology	3	30	30	0	0	O	Nguyễn Cẩm Linh, Trần Thị Thanh Tâm	F	02/2024	3/2024
24	MST3.011	Pharmacology and Toxicology	3	34	24	10	0	O	Nguyễn Thị Vân Anh	F	02/2024	3/2024
25	MST3.012	Molecular Medicine	3	30	24	6	0	O	Chu Đình Tới, Dương Quốc Chính	I	02/2024	3/2024
26	BIT3.008	Advanced Biochemistry	3	45	30	7	8	O	Germain Trugnan, Nguyễn Phương Nga	F+I	02/2024	3/2024
Biomedical Engineering (BME)												
27	MST3.017	Artificial Intelligence and Machine Learning in Medicine	4	50	50	0	0	M	Nguyễn Cẩm Linh, Trần Giang Sơn	F	02/2024	3/2024
28	MST3.015	Bio-MEMS	3	30	24	6	0	M	Phạm Văn Nhất	F	02/2024	3/2024
29	MST3.018	Biomedical Signal Processing and Modelling	3	36	20	0	16	O	Tran Quang Hung, Feriial Terki	I	02/2024	3/2024
30	MST3.019	Computational Vision and Biological Perception	3	30	30	0	0	O	Nguyễn Cẩm Linh, Lê Hữu Tôn, Nguyễn Hoàng Hà	F	02/2024	3/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
31	MST3.020	Medical Robotics and Rehabilitation	3	36	20	0	16	O	Invited lecturers	I	02/2024	3/2024
32	MST3.021	Biomechanics	3	30	30	0	0	O	Chuan Li	I	02/2024	3/2024
33	MST3.022	Imaging diagnostics	3	30	30	0	0	O	Lê Văn Quân	I	02/2024	3/2024

ANNEX 11: TEACHING PLAN OF BACHELOR PROGRAM IN BIOTECHNOLOGY - DRUG DISCOVERY IN 2023-2024

*(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)*

TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	BIT2.007	Organic Chemistry	3	30	24	0	6	M	Trần Tuấn Anh	F	9/2023	02/2024
2	BIT2.002	Biochemistry 2	4	40	32	8	6	M	Nguyễn Phương Nga Lê Thị Thu Hằng	F	9/2023	02/2024
3	BIT2.003	Bioanalytical Chemistry	3	35	19	6	10	M	Nguyễn Thị Kiều Oanh Lê Hồng Luyện	F	9/2023	02/2024
4	BIT2.005	Integrated Physiology part 2 (Plant)	3	30	27	0	3	M	Lê Thị Vân Anh	F	9/2023	02/2024
5	BIT2.008	Principles of Immunology	4	40	32	0	8	M	Trần Thị Thu Phương	F	9/2023	02/2024
6	BIT2.012	Introduction to Enzymology	4	40	31	9	0	M	Nguyễn Sỹ Lê Thanh Mai Thị Phương Nga Lê Thị Thu Hằng	F+I	9/2023	02/2024
7	BIT2.001	Molecular Biology	4	48	40	8	0	M	Mai Thị Phương Nga, Trần Thị Thanh Tâm	F	9/2023	02/2024
8	MST2.002	Advanced Cell Biology	3	40	24	8	8	O	Mai Thị Phương Nga, Nguyễn Thị Trang Huyền	F	9/2023	02/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	BIT2.004	Biostatistics	3	33	24	0	9	M	Nguyễn Thị Vân Anh	F	02/2024	7/2024
13	BIT2.009	Applied Microbiology	3	40	24	16	0	M	Tô Thị Mai Hương Nguyễn Quang Huy Nguyễn Văn Phụng USTH PhD student	F	02/2024	7/2024
14	BIT2.010	Integrated Physiology part 1 (Animal)	3	39	27	9	3	M	Tepmanas Bupha-Intr Nguyễn Thị Trang Huyền	F+I	02/2024	7/2024
15	BIT2.006	Introduction to Plant Cell Biotechnology	3	30	18	12	0	M	Lê Thị Vân Anh	F	02/2024	7/2024
16	BIT3.010	Introduction to food science and technology	3	36	27	9	0	M	Tô Thị Mai Hương Phạm Hoàng Nam	F	02/2024	7/2024
17	BIT2.016	Drug development and medicinal chemistry	4	42	36	6	0	M	Nguyễn Thị Kiều Oanh Nguyễn Hải Đăng Phạm Thế Hải	F	02/2024	7/2024
18	BIT2.014	Developmental Biology	3	30	21	0	9	O	Siripong Thitamadee	I	02/2024	7/2024
19	BIT2.015	Frontiers in Marine Biology	3	30	30	0	0	O	Lee Sang Hoon	I	02/2024	7/2024
20	BIT2.017	Plant Genetics and Breedings	3	30	25	0	5	O	Nguyễn Văn Phụng	F	02/2024	7/2024
21	BIT2.019	Basics on Phytomedicine and Natural Product Drugs	3	30	20	10	0	O	Lê Hồng Luyến	F	02/2024	7/2024
22	MST2.007	Medical Virology	3	40	28	6	6	O	Nguyễn Thị Thường	I	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
23	BIT2.020	Introduction to Ecological Agriculture	3	30	20	8	2	O	Nguyễn Văn Phương Phạm Hoàng Nam	F	02/2024	7/2024
24	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
25	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

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ANNEX 12: TEACHING PLAN OF BACHELOR PROGRAM IN PHARMACOLOGICAL, MEDICAL AND AGRONOMICAL BIOTECHNOLOGY IN 2023-2024

(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	BIT3.001	Group project	3					M			9/2023	02/2024
2	BIT3.002	Basic Pharmacology	4	40	30	10	0	M	Nguyễn Thị Vân Anh	F	9/2023	02/2024
3	BIT3.003	Basic Pharmaceutics	3	40	30	10	0	M	Nguyễn Hồng Vân	F	9/2023	02/2024
4	BIT3.004	Bioinformatics	3	35	35	0	0	M	Trần Thị Thanh Tâm Phạm Thế Hải	F	9/2023	02/2024
5	BIT3.005	Introduction to Stem Cell	3	40	27	0	13	M	Romain Fontaine	I	9/2023	02/2024
6	BIT3.006	Introduction to Medical Biotechnology	3	35	21	14	0	M	Nguyễn Quang Huy, Lê Thị Thu Hằng, Đào Thị Mai Lan	F	9/2023	02/2024
7	BIT3.007	Protein Engineering	3	40	32	8	0	M	Mai Thị Phương Nga Lê Thị Thu Hằng	F	9/2023	02/2024
8	BIT3.008	Advanced Biochemistry	3	45	30	7	8	M	Germain Trugnan Nguyễn Phương Nga	I,F	9/2023	02/2024
9	BIT3.009	Introduction to Biopharmaceutical Science	2	30	24	6	0	M	Phạm Thế Hải	F	9/2023	02/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
11	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
12	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
13	BIT2.011	Introduction to Animal Cell Biotechnology	3	30	21	9	0	M	Nguyễn Thị Trang Huyền Lê Thanh Hương, Trần Thị Thu Phương	F	02/2024	7/2024
14	BIT3.011	Metabolic Engineering	3	36	36	0	0	M	Tô Thị Mai Hương Trần Tuấn Anh	F	02/2024	7/2024
15	BIT3.012	Fermentation Technology	2	24	18	6	0	O	Phạm Hoàng Nam Nguyễn Quang Huy	F	02/2024	7/2024
16	BIT3.013	Introduction to Neuron Science	2	20	20	0	0	O	Witchuda Sangsawang	I	02/2024	7/2024
17	BIT3.014	Pathogenic Microbiology	2	24	18	6	0	O	Nguyễn Quang Huy Nicolas Papon	F	02/2024	7/2024
18	FST3.015	Functional food	2	24	17	7	0	O	Lê Thanh Hương	F	02/2024	7/2024
19	BIT3.015	Plant - Microorganism Interaction	2	20	18	0	2	O	Nguyễn Văn Phương	F	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
20	BIT3.018	Advanced technologies for Plant Science	2	20	20	0	0	O	Tô Thị Mai Hương Trịnh Duy Chí	F	02/2024	7/2024
21	PHA4.025	Cosmetics	2	20	20	0	0	O	Nguyễn Hồng Vân	F	02/2024	7/2024
22	PHA4.009	Biologics	2	20	20	0	0	O	Trần Thị Thu Phương	F	02/2024	7/2024
23	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
24	BIT3.016	Internship	12					M			4/2024	10/2024

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ANNEX 13: TEACHING PLAN OF BACHELOR PROGRAM IN APPLIED ENVIRONMENTAL SCIENCES IN 2023-2024

(Promulgated with Decision No. *716* /QĐ-ĐHKHCN dated *August 22nd*, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

13.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	AES2.002	Ecology and biodiversity	3	36	22	6	8	M	Girley Gumanao	I	9/2023	02/2024
2	AES2.024	Microbiology in environmental sciences	3	36	28	8		M	Phạm Thùy Linh	I	9/2023	02/2024
3	AES2.012	Water pollution	4	48	39	9		M	Mai Hương	F	9/2023	02/2024
4	AES2.013	Atmospheric pollution	2	24	15	6	3	M	Hoàng Anh Lê	I	9/2023	02/2024
5	AES2.020	Green chemistry	2	24	14	10		M	Bùi Đức Trung, Bùi Văn Hợi	F+I	9/2023	02/2024
6	AES2.022	Environmental analytical chemistry	4	48	36	12		M	Bùi Văn Hợi	F	9/2023	02/2024
7	SA2.014	Probability and statistics	4	40	20		20	M	Nguyễn Lê Dũng, Nguyễn Quốc Sơn, Phạm Lê Anh	F	8/2023	01/2024
8	EER2.003	Fluid mechanics	3	45	33	12		M	Bùi Văn Tuấn	F	9/2023	02/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	AES2.006	Climate change	3	36	24	12		M	Ngô Đức Thành	F	02/2024	7/2024
13	AES2.007	Environmental toxicology	3	36	24	12		M	Mai Hương	F	02/2024	7/2024
14	AES2.008	Hydrology	3	36	24	6	6	M	Nguyễn Quốc Sơn	F	02/2024	7/2024
15	AES2.025	Introduction to oceanography	2	24	21		3	M	Phạm Tiến Đạt	I	02/2024	7/2024
16	AES2.010	Soil science	3	36	26	10		M	Christian Valentin, Mai Hương	F+I	02/2024	7/2024
17	AES2.014	Solid and hazardous waste management	2	24	15	9		O	Đào Thành Dương	F	02/2024	7/2024
18	AES2.016	Soil pollution	2	24	20	4		O	Mai Hương	F	02/2024	7/2024
19	AES2.026	Introduction to environmental electrochemistry	2	24	18	6		M	Lê Phương Thu, Đinh Thị Mai Thanh	F	02/2024	7/2024
20	AES2.027	Life cycle assessment	2	24	18		6	O	Nguyễn Thanh Hiền	F	02/2024	7/2024
21	AES2.019	Environment and public health	2	24	24			O	Phạm Lê Anh	F	02/2024	7/2024
22	AES2.021	Engineering drawing	3	36	24		12	M	Nguyễn Thế Lương	I	02/2024	7/2024
23	AES2.023	Geographic information system for environment management	2	24	10	14		M	Tống Sĩ Sơn	F	02/2024	7/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
24	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
25	MS2.006	Intellectual property management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

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13.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	AES3.002	Data treatment	3	36	30	6		M	Phạm Lê Anh	F	9/2023	2/2024
2	AES3.005	Environmental management	2	24	20		4	M	Mai Hương	F	9/2023	2/2024
3	AES3.008	Recycling and waste treatment	2	24	15	9		M	Đào Thành Dương	F	9/2023	2/2024
4	AES3.010	Analytical separation methods	2	24	18	6		M	Vũ Cẩm Tú	F	9/2023	2/2024
5	AES3.011	Drinking water treatment	3	36	30	6		M	Phạm Lê Anh	F	9/2023	2/2024
6	AES3.024	Applied spectrometry for environmental analysis	3	36	28	8		M	Bùi Văn Hợi	F	9/2023	2/2024
7	AES3.025	Catalysis and its applications	4	48	32	16		M	Lê Phương Thu, Đinh Thị Mai Thanh	F	9/2023	2/2024
8	AES3.026	Applied ecology	3	36	21	6	9	M	Nguyễn Thanh Hiền	F	9/2023	2/2024
9	AES3.015	Air pollution control	2	24	15	3	6	O	Hoàng Anh Lê	I	9/2023	2/2024
10	AES3.029	Wastewater treatment modelling	2	24	24			O	Phạm Lê Anh	F	9/2023	2/2024
11	AES3.030	Management of environmental incident response	2	24	20		4	O	Mai Hương, invited lecturer	F+I	9/2023	2/2024



No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	AES3.031	Sampling and sample preparation	2	24	12	12		O	Bùi Văn Hợi	F	9/2023	2/2024
13	FR3.001	French 3.1	4	66	66	0	0	M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
14	FR3.002	French 3.2	3	34	34	0	0	M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
15	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
16	AES3.009	Advanced oceanography	2	24	15		9	M	Phạm Tiến Đạt	I	2/2024	7/2024
17	AES3.012	Environmental impact assessment	2	24	15	9		M	Đào Thành Dương	F	2/2024	7/2024
18	AES3.014	Waste water treatment	3	36	27	9		M	Đào Thành Dương	F	2/2024	7/2024
19	AES3.027	Environmental monitoring	3	36	18	18		M	Nguyễn Quốc Sơn, Tống Sĩ Sơn, Phạm Đức Bình	F	2/2024	7/2024
20	AES3.028	Sustainable development	3	36	30		6	M	Vũ Cẩm Tú	F	2/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
21	AES3.032	Design of a wastewater treatment plant	3	36		24	12	M	Đào Thành Dương, Nguyễn Tuấn Minh	F+I	2/2024	7/2024
22	MS3.002	Startups	2	20	20	0	0	O	Trần Minh Thu	I	02/2024	7/2024
23	AES3.021	Internship	9					M		I	2/2024	7/2024

ANNEX 14: TEACHING PLAN OF BACHELOR PROGRAM IN MECHATRONICS ENGINEERING TECHNOLOGY IN 2023-2024

(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

14.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MET2.001	Introduction to mechatronics	2	28	14	10	4	M	Nguyễn Văn Trường, Dương Việt Anh	F+I	8/2023	01/2024
2	MET2.002	General mechanics of rigid solids 1	2	30	21		9	M	Dương Việt Anh	F	8/2023	01/2024
3	MET2.003	Electrical engineering 1	4	50	30	12	8	M	Hoàng Trung Kiên, Nguyễn Xuân Trường	F	8/2023	01/2024
4	MET2.004	Analog electronics	4	50	35	9	6	M	Phạm Duy An	F	8/2023	01/2024
5	SA2.014	Probability and Statistics	4	40	20		20	M	Nguyễn Lê Dũng, Nguyễn Quốc Sơn, Phạm Lê Anh	F	8/2023	01/2024
6	MAT2.001	Numerical methods	3	36	21		15	M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F	8/2023	01/2024
7	ICT2.003	Object oriented programming	4	40	30	10		M	Nghiêm Thị Phương	F	8/2023	01/2024
8	MET2.006	Micro-processor and micro-controller	3	35	25	10		M	Phạm Xuân Tùng	F	8/2023	01/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	MET2.007	Digital electronics	4	50	36	8	6	M	Phạm Duy An	F	02/2024	7/2024
13	EER2.014	Sensors and analytical devices	4	40	25	15		M	Dương Việt Anh, Phạm Xuân Tùng	F	02/2024	7/2024
14	MET2.008	Math for the mechanical engineers	3	45	30		15	M	Nguyễn Việt Khoa	I	02/2024	7/2024
15	MET2.009	General mechanics of rigid solids 2	4	60	40		20	M	Nguyễn Lương Thiện	I	02/2024	7/2024
16	MET2.010	Materials 1	3	36	26	3	7	M	Nguyễn Văn Tăng	F	02/2024	7/2024
17	MET2.011	Design 1	4	40	16	24		M	Thái Minh Quân	I	02/2024	7/2024
18	MET2.013	Manufacturing 1	3	45	30	6	9	M	Phạm Văn Bạch Ngọc, Phạm Xuân Tùng	F+I	02/2024	7/2024
21	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
22	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

14.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MET3.001	Summer internship	4					M			8/2023	01/2024
2	MET3.002	Non-metallic materials	3	36	19	10	7	M	Nguyễn Anh Tuấn	I	8/2023	01/2024
3	MET3.003	Manufacturing 2	3	45	26	7	12	M	Phạm Văn Bạch Ngọc, Phạm Xuân Tùng	F+I	8/2023	01/2024
4	MET3.004	Industrialization	3	36	26	3	7	M	Lê Văn Thảo	I	8/2023	01/2024
5	MET3.005	Signal processing	3	40	23	8	9	M	Phan Anh Tuấn	F	8/2023	01/2024
6	MET3.006	Design 2	4	40	16	24		M	Thái Minh Quân	I	8/2023	01/2024
7	MET3.007	Automatic control 1	3	44	28	9	7	M	Phan Anh Tuấn	F	8/2023	01/2024
8	MET3.008	Embedded system	3	35	10	25		M	Phạm Xuân Tùng	F	8/2023	01/2024
9	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
10	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

JP

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
12	MET3.009	Automatic control 2	3	36	23	6	7	M	Dương Việt Anh	F	02/2024	7/2024
13	MET3.010	Group project	3					M			02/2024	7/2024
14	MET3.011	Control of automated system	2	24	18		6	M	Trịnh Lương Miên	I	02/2024	7/2024
15	EER3.005	Power electronics and applications	4	46	26	11	9	O	Hoàng Trung Kiên, Phan Anh Tuấn	F	02/2024	7/2024
16	MET3.012	Electrical engineering 2	3	38	19	10	9	O	Hoàng Trung Kiên	F	02/2024	7/2024
17	MET3.013	Materials 2	3	36	26	3	7	O	Nguyễn Anh Tuấn	I	02/2024	7/2024
18	MET3.014	Management of manufacturing	4	49	27	10	12	O	Lê Văn Thảo	I	02/2024	7/2024
19	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
20	MET3.015	Internship	9					M			02/2024	7/2024

ANNEX 15: TEACHING PLAN OF BACHELOR PROGRAM IN DATA SCIENCE IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

15.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	8/2023	12/2023
2	DS2.004	Probability	3	36	18		18	M	Đoàn Nhật Minh	I	8/2023	12/2023
3	ICT2.001	Data Structures and Algorithms	3	36	20	16		M	Đoàn Nhật Quang, Nguyễn Minh Hương, Lê Hữu Tôn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
4	ICT2.003	Object-Oriented Programming	4	40	30	10		M	Nghiêm Thị Phương, Trần Giang Sơn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
5	ICT2.004	Signal and Systems	3	36	30		6	M	Trần Hoàng Tùng, Trần Đức Tân	F+I	9/2023	01/2024
6	ICT2.005	Fundamentals of databases	3	36	27	9		M	Nguyễn Hoàng Hà, Nguyễn Cẩm Linh, Huỳnh Vinh Nam, Kiều Quốc Việt	F	9/2023	01/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
7	ICT2.013	Advanced Programming with Python	4	40	30	10		M	Trần Giang Sơn, Nguyễn Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
8	DS2.001	Introduction to Artificial Intelligence	3	30	30			M	Nguyễn Thị Phương	F	9/2023	01/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	MAT2.004	Algebraic Structures	3	36	20		16	M	Đoàn Nhật Quang	F	01/2024	4/2024
13	ICT3.002	Machine Learning and Data Mining 1	3	30	21	9		M	Lê Hữu Tôn, Đoàn Nhật Quang	F	01/2024	3/2024
14	ICT3.011	Machine Learning and Data Mining 2	3	36	20	16		M	Đoàn Nhật Quang, Lê Hữu Tôn, Huỳnh Vinh Nam	F	01/2024	3/2024
15	DS2.002	Fundamentals of optimization	3	36	18		18	M	Lê Xuân Thanh	I	01/2024	3/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
16	DS2.005	Statistics	3	36	18		18	M	Hồ Đăng Phúc	I	3/2024	6/2024
17	ICT2.009	Software Engineering	3	36	26		10	M	Lê Minh Đức, Nguyễn Chí Cường, Đỗ Oanh Cường, Nguyễn Văn Công	I	3/2024	5/2024
18	ICT2.010	Image Processing	3	36	27	9		M	Trần Giang Sơn, Nguyễn Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	3/2024	5/2024
19	DS2.003	Applied Statistics and Experimental Design	3	36	18		18	M	Đoàn Thái Sơn	I	3/2024	6/2024
20	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
21	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

15.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	DS3.001	Fundamentals of data science	3	36	24	12		M	Nguyễn Đức Dũng	I	8/2023	12/2023
2	DS3.002	Data visualization	3	36	15	21		M	Nguyễn Lê Dũng, Nguyễn Duy Tùng	F+I	8/2023	12/2023
3	DS3.003	Time series data analysis	3	36	24	12		M	Trịnh Tuấn Phong	I	8/2023	12/2023
4	DS3.004	Graph analytics for big data	3	36	18	15	3	M	Cần Văn Hào, Đỗ Văn Hoàn	I	9/2023	2/2024
5	ICT3.006	Advanced databases	3	31	21	10		M	Lê Hồng Hải	I	10/2023	12/2023
6	ICT3.012	Distributed Systems	3	30	20	10		M	Astsatryan Hrach	I	9/2023	2/2024
7	ICT3.017	Introduction to Deep Learning	3	36	27	9		M	Trần Giang Sơn, Nguyễn Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	10/2023	12/2023
8	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023

JH

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
9	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023
10	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
11	ICT3.015	Computer Vision	3	30	20	10		M	Nguyễn Đức Dũng	I	01/2024	3/2024
12	ICT3.013	Natural Language Processing	3	30	20	10		M	Phạm Quang Nhật Minh	I	01/2024	3/2024
13	DS3.005	Introduction to bioinformatics	3	30	20	10		O	Nguyễn Cẩm Linh	F	01/2024	3/2024
14	DS3.006	Machine learning in medicine	3	36	27	9		O	Trần Giang Sơn	F	01/2024	3/2024
15	DS3.007	Analysis of spatial and temporal data	3	36	20	16		O	Nguyễn Xuân Thành	F	01/2024	3/2024
16	DS3.008	Data analysis in atmospheric sciences	3	36	24	12		O	Nguyễn Lê Dũng	F	01/2024	3/2024
17	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
18	GP3.001	Group project	3					M				
19	IN3.002	Internship	15					M				

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ANNEX 16: TEACHING PLAN OF BACHELOR PROGRAM IN AUTOMOTIVE ENGINEERING IN 2023-2024

(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

16.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	ATE2.001	Introduction to automotive engineering	2	24	18	0	6	M	Vũ Văn Tấn	I	8/2023	01/2024
2	ATE2.002	General mechanics of rigid solids	3	45	30	0	15	M	Dương Việt Anh	F	8/2023	01/2024
3	ATE2.003	Analog and digital electronics	3	45	30	10	5	M	Phạm Duy An	F	8/2023	01/2024
4	EER2.003	Fluid mechanics	3	45	33	12	0	M	Bùi Văn Tuấn	F	8/2023	01/2024
5	SA2.014	Probability and Statistics	4	40	20		20	M	Nguyễn Lê Dũng, Nguyễn Quốc Sơn, Phạm Lê Anh	F	8/2023	01/2024
6	ATE2.004	Automobile structure	4	47	34	5	8	M	Lê Huệ Tài Minh	F	8/2023	01/2024
7	ATE2.010	Technical drawing	3	45	20	15	10	M	Phạm Xuân Tùng	I	8/2023	01/2024
8	ATE2.006	Electrical engineering	3	45	24	9	12	M	Hoàng Trung Kiên	F	8/2023	01/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	ATE2.005	Principles of internal combustion engine	3	45	30	15	0	M	Nguyễn Thế Lương, Lê Huệ Tài Minh	F+I	02/2024	7/2024
13	ATE2.007	Mechanics of materials	3	45	30	0	15	M	Nguyễn Lương Thiện	I	02/2024	7/2024
14	EER2.014	Sensors and analytical devices	4	45	30	15	0	M	Phạm Xuân Tùng, Dương Việt Anh	F	02/2024	7/2024
15	MET2.008	Mathematics for the mechanical engineers	3	45	30	0	15	M	Nguyễn Việt Khoa	I	02/2024	7/2024
16	ATE2.008	Materials	3	36	26	3	7	M	Nguyễn Văn Tăng	F	02/2024	7/2024
17	ATE2.009	Machine design	3	45	27	6	12	M	Bùi Văn Hưng	I	02/2024	7/2024
18	ATE2.011	Automotive theory	4	46	36	0	10	M	Lê Huệ Tài Minh	F	02/2024	7/2024
19	ATE2.012	Automobile design	3	45	39	0	6	M	Lê Văn Nghĩa	I	02/2024	7/2024
20	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
21	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

16.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	ATE3.001	Summer internship	2					M			8/2023	01/2024
2	ATE3.002	Automobile manufacturing	3	38	29	0	9	M	Lê Văn Nghĩa	I	8/2023	01/2024
3	ATE3.003	Environmental engineering	2	30	20	10	0	M	Vũ Thị Thu Nga	I	8/2023	01/2024
4	ATE3.004	Power electronics and applications	3	45	23	13	9	M	Hoàng Trung Kiên	F	8/2023	01/2024
5	ATE3.005	Automatic control	3	44	28	9	7	M	Phan Anh Tuấn	F	8/2023	01/2024
6	ATE3.006	Automobile diagnostics, maintenance and repair F1	3	36	24	12	0	M	Trần Anh Trung	I	8/2023	01/2024
7	ATE3.007	Automotive electrical systems	4	45	24	9	12	M	Lê Huệ Tài Minh	F	8/2023	01/2024
8	ATE3.008	Automotive research and development	2	30	16	8	6	M	Phạm Xuân Mai	I	8/2023	01/2024
9	MET3.008	Embedded system	3	35	10	25	0	M	Phạm Xuân Tùng	F	8/2023	01/2024
10	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
11	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
13	ATE3.009	Automobile simulation	2	30	20	6	4	M	Lê Huệ Tài Minh	F	02/2024	7/2024
14	ATE3.010	Group project	3					M			02/2024	7/2024
15	ATE3.011	Control of automated system	3	36	24	6	6	M	Abdelkader EL KAMEL	I	02/2024	7/2024
16	ATE3.012	Mechatronics system on automobiles	4	46	26	11	9	M	Nguyễn Đăng Quý	I	02/2024	7/2024
17	ATE3.013	Automobile experiment	3	36	14	16	6	O	Phạm Xuân Phương	I	02/2024	7/2024
18	ATE3.014	Automobile diagnostics, maintenance and repair F2	3	44	29	15	0	O	Trần Anh Trung	I	02/2024	7/2024
19	ATE3.015	Connected autonomous vehicles	3	45	30	0	15	O	Phạm Xuân Mai	I	02/2024	7/2024
20	ATE3.016	Hybrid and electric vehicles	3	36	24	6	6	O	Vũ Văn Tấn, Lê Huệ Tài Minh	F+I	02/2024	7/2024
21	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
22	ATE3.017	Internship	9					M			4/2024	10/2024

ANNEX 17: TEACHING PLAN OF BACHELOR PROGRAM IN SPACE SCIENCE AND SATELLITE TECHNOLOGY IN 2023-2024

*(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)*

17.1. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	SA2.014	Probability and Statistics	4	40	20		20	M	Nguyễn Lê Dũng, Nguyễn Quốc Sơn, Phạm Lê Anh	F	8/2023	01/2024
2	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền	F+I	8/2023	01/2024
3	SA2.002	Introduction to Astronomy	3	30	21	9		M	Phan Thanh Hiền	F	8/2023	01/2024
4	AMS2.001	Electromagnetism 2	3	30	24	6		M	Nguyễn Thị Ngọc	F	8/2023	01/2024
5	SA2.003	Classical Mechanics 2	3	36	30	6		M	Nguyễn Thị Hồng Vân	I	8/2023	01/2024
6	EER2.003	Fluid Mechanics	3	45	33	12		M	Bùi Văn Tuấn	F	8/2023	01/2024
7	SA2.005	Thermodynamics 2	3	30	24	6		M	Nguyễn Hoàng Nam, Nguyễn Hồng Nam	F+I	8/2023	01/2024
8	PHY2.005	Mechanics of Materials	3	52	36	16		M	Nguyễn Văn Tăng	F	8/2023	01/2024
9	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	SA2.007	Introduction to Geographic Information System	2	24	10	14		M	Tổng Sĩ Sơn	F	02/2024	7/2024
13	SA2.008	Quantum Mechanics	3	36	26	10		M	Nguyễn Trần Thuật	I	02/2024	7/2024
14	SA2.009	Solar system and celestial mechanics	3	36	20	16		M	Phan Thanh Hiền	F	02/2024	7/2024
15	SA2.010	Electronics	4	40	30			M	Nguyễn Trần Thuật, Nguyễn Xuân Trường	F+I	02/2024	7/2024
16	SA2.011	Data analysis and visualisation	2	30	20	10		M	Nguyễn Lê Dũng	F	02/2024	7/2024
17	SA2.012	Fundamental of Remote Sensing	3	36	21	15		M	Tổng Sĩ Sơn	F	02/2024	7/2024
18	SA2.013	Introduction to Earth System	3	36	24	12		M	Ngô Đức Thành	F	02/2024	7/2024
19	EER2.013	Product design 1	3	40	16	24		M	Thái Minh Quân	I	02/2024	7/2024
20	SA2.004	Automatism and Industrial data processing	2	30	20	10		M	Phan Thanh Hòa	I	02/2024	7/2024
21	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
22	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

17.2. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
23	SA3.011	Climate Modelling	3	36	24	12		M	Ngô Đức Thành	F	8/2023	01/2024
24	SA3.002	Signal and Image processing in space applications	4	40	25	15		M	Nguyễn Công Phương	I	8/2023	01/2024
25	SA3.009	Data acquisition & Satellite sensors	3	36	15	21		M	Tống Sĩ Sơn, Phạm Đức Bình	F	8/2023	01/2024
26	SA3.003	Space System Design 1 (satellite)	3	36	20	16		M	Lê Xuân Huy, Nguyễn Tiến Sự	I	8/2023	01/2024
27	SA3.017	Modern Astrophysics	3	42	30	12		M	Phạm Ngọc Điệp, Thái Minh Quân	I	8/2023	01/2024
28	EER3.006	Product Design 2	3	36	6	30		M	Thái Minh Quân	I	8/2023	01/2024
29	SA3.007	Introduction to Relativity	2	24	15	9		M	Guillaume Patanchon, Bùi Văn Tuấn	F+I	8/2023	01/2024
31	SA3.005	Particle physics	3	30	24	6		M	Nguyễn Thị Hồng Vân	I	8/2023	01/2024
30	FR3.001	French 3.1	4	66	66			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	10/2023
39	FR3.002	French 3.2	3	34	34			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	11/2023	11/2023

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
32	MS3.001	Scientific Writing and Communication	2	20	20			O	Tô Thị Mai Hương	F	9/2023	02/2024
Semester 2												
33	SA3.006	Communication, Antenna and Microwaves	4	40	25		15	M	Nguyễn Công Phương	I	01/2024	3/2024
34	SA3.008	Radar remote sensing of Earth's surface	3	36	15			M	Thierry Koleck, Đặng Vũ Khắc	I	01/2024	3/2024
35	SA3.010	Space System Design 2 (satellite)	3	36	16		20	M	Nguyễn Tiến Sự	I	01/2024	3/2024
36	SA3.012	Photonics and optics	3	30	20		10	M	Phan Thanh Hiền	F	01/2024	3/2024
37	SA3.013	Monitoring natural disasters by using satellite data	2	24	12		12	M	Phạm Đức Bình	F	01/2024	3/2024
38	SA3.015	Group Project	3					M			01/2024	3/2024
40	MS3.002	Startups	2	20	20			O	Trần Minh Thu	I	02/2024	7/2024
41	SA3.016	Internship	9					M			4/2024	10/2024

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ANNEX 18: TEACHING PLAN OF BACHELOR PROGRAM IN AERONAUTICAL ENGINEERING IN 2023-2024

(Promulgated with Decision No. 716/QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

18.1. TEACHING PLAN OF B1

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	ENG1.015	English Academic Writing	2	24	24			M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, invited lecturers	F+I	9/2023	01/2024
2	ENG1.014	English Listening and Note-taking	2	28	28			M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, invited lecturers	F+I	9/2023	01/2024
3	AE1.016	Calculus 1	3	36	18		18	M	Lê Hải Khôi Lương Thái Hưng Đỗ Hoàng Sơn Đào Quang Khải Phạm Việt Hùng Nguyễn Huyền Mười	F+I	9/2023	01/2024
4	AE1.021	Linear Algebra	4	40	20		20	M	Nguyễn Việt Dũng Nguyễn Bích Vân Lê Xuân Thanh Võ Quốc Bảo Nguyễn Thế Hoàng Lê Hải Yến Hà Minh Lam	F+I	9/2023	01/2024
5	AE1.020	Mechanics 1	3	44	36	8		M	Bùi Văn Tuấn	F	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
6	AE1.022	Electricity và Electromagnetism 1	4	60	48	12		M	Ngô Quang Minh	F	9/2023	01/2024
7	AE1.007	Introduction to Aeronautics 2	3	36	36			M	Nguyễn Văn Tăng	F	9/2023	01/2024
8	AE1.003	Classical optics and wave optics	2	24	20	4		M	Ngô Quang Minh	F	9/2023	01/2024
9	AE1.002	Fluid mechanics	3	45	33	12		M	Bùi Văn Tuấn	F	9/2023	01/2024
10	AE1.015	CATIA V5 Basic Training	2	24	24			M	Trần Anh Tú	F	9/2023	01/2024
Semester 2												
11	MAT1.003	Calculus 2	3	36	18		18	M	Lê Hải Khôi Phạm Việt Hùng Lương Thái Hưng Đỗ Hoàng Sơn Nguyễn Huyền Mười	F+I	02/2024	7/2024
12	ICT1.002	Basic programming	4	40	28	12		M	Nguyễn Hoàng Hà Nguyễn Minh Hương Giang Anh Tuấn Lê Hữu Tôn Kiều Quốc Việt Tống Sĩ Sơn Huỳnh Vinh Nam	F+I	02/2024	7/2024
13	AE2.003	Mechanics 2	3	33	30	3		M	Bùi Văn Tuấn	F	02/2024	7/2024
14	AE2.005	Probabilities and Statistics	3	40	20		20	M	Trần Anh Tú, Nguyễn Thị Vân Anh, Trần Thị Thanh Tâm	F	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
15	AE1.023	Electricity and Electromagnetism 2	4	58	46	12		M	Ngô Quang Minh	F	02/2024	7/2024
16	AE1.024	Electronics 1	4	74	30	20	24	M	Phạm Duy An, Invited lecturer	F+I	02/2024	7/2024
17	AE1.025	Introduction to Aeronautics 1	2	24	24			M	Invited lecturer	I	02/2024	7/2024
18	AE1.009	Waves and sounds	2	24	20	4		M	Nguyễn Xuân Bách	F	02/2024	7/2024
19	AE2.006	Thermodynamics	3	40	36	4		M	Nguyễn Xuân Bách	F	02/2024	7/2024
20	AE2.017	CATIA V5 Advanced Training	2	24	24			M	Trần Anh Tú, Phạm Xuân Tùng	F	02/2024	7/2024
21	AE1.026	Aeronautical Technical English	2	24	24			M	Lương Minh Hoàng	I	02/2024	7/2024

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18.2. TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	FR2.001	French 2.1	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	12/2023	3/2024
2	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
3	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
4	AE2.019	Signal and Image processing	3	36	36			M	Nguyễn Công Phương	I	9/2023	01/2024
5	AE2.010	Automatism	3	44	40	4		M	Trần Anh Tú	F	9/2023	01/2024
6	AE2.008	Aerodynamics and Flight mechanics	4	53	45	8		M	Hoàng Thị Kim Dung, Bùi Văn Tuấn	F+I	9/2023	01/2024
7	AE2.002	Materials	6	91	75	16		M	French lecturer, Nguyễn Văn Tăng	F+I	9/2023	01/2024
8	AE2.020	Electrical power	2	24	20	4		M	Phạm Duy An	F	9/2023	01/2024
9	AE2.021	Electronics systems: Analog systems and Digital systems	4	58	50	8		M	Phạm Duy An	F	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	AE2.015	Numerical methods and Matlab	3	40	21	19		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	9/2023	01/2024
11	AE2.017	CATIA V5 Advanced Training	2	24	24			M	Trần Anh Tú	F	9/2023	01/2024
Semester 2												
12	FR2.002	French 2.2	4	60	60			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	3/2024	6/2024
13	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024
14	AE2.006	Thermodynamics	3	40	36	4		M	Nguyễn Xuân Bách	F	02/2024	7/2024
15	AE2.022	Mechanics of Materials	4	52	36	16		M	Nguyễn Văn Tăng	F	02/2024	7/2024
16	AE2.023	Electronics systems: Instrument systems, avionics and troubleshooting	4	66	50	16		M	French lecturer, Phạm Duy An	F+I	02/2024	7/2024
17	AE2.013	Thermal systems	4	52	40	12		M	Nguyễn Văn Tăng	F	02/2024	7/2024
18	AE2.024	Hydraulic/Pneumatic power	2	30	26	4		M	Nguyễn Xuân Bách	F	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
19	AE1.026	Aeronautical Technical English	2	24	24			M	Lương Minh Hoàng	I	02/2024	7/2024
20	AE2.014	Internship	4					M			6/2024	8/2024

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18.3. TEACHING PLAN OF B3

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	AE3.026	Safety and Human Factors	2	27	27			M	French lecturer	I	9/2023	01/2024
2	AE3.003	Gas turbine engine	3	38	30	8		M	Nguyễn Văn Tăng	F	9/2023	01/2024
<i>Operation Engineering</i>												
3	AE3.028	Accounting of maintenance projects	2	24	24			M	Lê Trà My	I	9/2023	01/2024
4	AE3.007	Maintenance and realibility	4	54	54			M	French lecturer, Nguyễn Xuân Bách	F+I	9/2023	01/2024
5	AE3.016	Power electronics	3	38	30	8		M	Nguyễn Kiên Trung, Tô Quang Hoàn	I	9/2023	01/2024
6	AE3.017	Vibrations	3	30	30			M	Lê Thị Tuyết Nhung	I	9/2023	01/2024
7	AE3.029	Presentation skills/professional orientation	2	24	24			M	Hoàng Thị Mỹ Linh	I	9/2023	01/2024
8	AE3.030	Airline management	3	30	30			M	Trần Thị Thái Bình	I	9/2023	01/2024
9	AE3.031	Aviation mass and performance	3	36	36			M	Trần Thị Thái Bình	I	9/2023	01/2024
10	AE3.032	Communication - radio	3	36	36			M	Nguyễn Vũ Phong, Nguyễn Thế Anh	I	9/2023	01/2024
<i>Maintenance Engineering</i>												
11	AE3.026	Safety and Human Factors	2	27	27			M	French lecturer	I	9/2023	01/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
12	AE3.008	Aerodynamics structures and systems 1	6	76	60	16		M	Nguyễn Xuân Bách, Tô Quang Hoàn	F+I	9/2023	01/2024
13	AE3.003	Gas turbine engine	3	38	30	8		M	Nguyễn Văn Tăng	F	9/2023	01/2024
14	AE3.012	Gas turbine engine 2	6	140	120	20		M	VAECO lecturer	I	9/2023	01/2024
15	AE3.013	Propeller	2	26	26			M	VAECO lecturer	I	9/2023	01/2024
16	AE3.036	Aeroplane Aerodynamics, structures and systems 2	16	290	250	40		M	VAECO lecturer	I	9/2023	01/2024
Semester 2												
17	AE3.025	Aviation regulations	2	27	27			M	French lecturer	I	02/2024	7/2024
<i>Operation Engineering</i>												
18	AE3.027	Legal environment of maintenance contracts	2	24	24			M	Trần Ánh Hồng	I	02/2024	7/2024
19	AE3.018	Flight operations	4	48	48			M	French lecturer, Bùi Văn Tuấn	F+I	02/2024	7/2024
20	AE3.020	Project Management and Quality assurance	2	24	24			M	Trần Ánh Hồng	I	02/2024	7/2024
21	AE3.033	Navigation	3	36	36			M	Nguyễn Vũ Phong, Nguyễn Thế Anh	I	02/2024	7/2024
22	AE3.034	Air traffic management	4	48	48			M	Nguyễn Vũ Phong, Nguyễn Thế Anh	I	02/2024	7/2024
23	AE3.035	Internship	15					M			4/2024	7/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
<i>Maintenance Engineering</i>												
24	AE3.009	Maintenance practices	9	160	120	40		M	French lecturer, Hà Mạnh Tuấn, Tô Quang Hoàn	I	02/2024	7/2024
25	AE3.037	Materials and hardware	5	66	50	16		M	Vũ Đình Quý, Tô Quang Hoàn	I	02/2024	7/2024
26	AE3.021	Internship	9					M			7/2024	11/2024



ANNEX 19: TEACHING PLAN OF THE DOUBLE DEGREE BACHELOR PROGRAM IN INFORMATION AND COMMUNICATION TECHNOLOGY

IN 2023-2024

(Promulgated with Decision No. 716/QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	MAT2.001	Numerical Methods	3	36	21	15		M	Thái Minh Quân, Phan Thanh Hiền, Phạm Đức Bình, Trần Anh Tú, Nguyễn Lê Dũng, Nguyễn Xuân Thành	F+I	8/2023	12/2023
2	MAT2.002	Probability and Statistics	4	40	20		20	M	Trần Hoàng Tùng, Nguyễn Mai Chung, Nguyễn Minh Hương, Hoàng Phi Dũng	F+I	8/2023	12/2023
3	ICT2.001	Data Structures and Algorithms	3	36	20	16		M	Đoàn Nhật Quang, Nguyễn Minh Hương, Lê Hữu Tôn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	8/2023	12/2023
4	ICT2.003	Object-Oriented Programming	4	40	30	10		M	Nghiêm Thị Phương, Trần Giang Sơn, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
5	ICT2.004	Signal and Systems	3	36	30		6	M	Trần Hoàng Tùng, Trần Đức Tân	F+I	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
6	ICT2.005	Fundamentals of databases	3	36	27	9		M	Nguyễn Hoàng Hà, Nguyễn Cẩm Linh, Huỳnh Vinh Nam, Kiều Quốc Việt	F	3/2023	5/2024
7	ICT2.013	Advanced Programming with Python	4	40	30	10		M	Trần Giang Sơn, Nghiêm Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	9/2023	01/2024
8	FR2.003	French double degree 4	7	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	11/2023
9	MS2.005	Basic Principles of Project Management	2	20	20	0		O	Nguyễn Văn Hùng	I	9/2023	02/2024
10	PHI2.001	Philosophy	0	30	30	0		M	Trần Xuân Bình	I	9/2023	02/2024
Semester 2												
11	ICT2.008	Operating Systems	4	40	30		10	M	Daniel Hagimont, Huỳnh Vinh Nam, Kiều Quốc Việt, Đỗ Oanh Cường	F+I	01/2024	4/2024
12	MAT2.004	Algebraic Structures	3	36	20		16	M	Đoàn Nhật Quang	F	01/2024	4/2024
13	ICT2.006	Computer Networks	4	40	30	10		M	Giang Anh Tuấn, Lương Trung Kiên	F+I	01/2024	4/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturer	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
14	ICT2.009	Software Engineering	3	36	26		10	M	Lê Minh Đức, Nguyễn Chí Cường, Đỗ Oanh Cường, Nguyễn Văn Công	I	3/2024	5/2024
15	MAT2.005	Computational theory	3	36	30		6	M	Giang Anh Tuấn, Luong Trung Kiên	F+I	8/2023	12/2023
16	ICT2.007	Digital Signal Processing	3	36	30		6	M	Trần Đức Tân, Lâm Sinh Công, Nguyễn Phương Anh	I	3/2024	5/2024
17	ICT3.002	Machine Learning and Data Mining 1	3	30	21	9		M	Lê Hữu Tôn, Đoàn Nhật Quang	F	3/2024	5/2024
18	FR2.004	French double degree 5	0	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	01/2024	4/2024
19	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024
20	ICT2.010	Image Processing	3	36	27	9		O	Trần Giang Sơn, Nguyễn Thị Phương, Kiều Quốc Việt, Huỳnh Vinh Nam	F	3/2024	5/2024
21	ICT2.011	Mobile Wireless Communication	3	30	20		10	O	Nguyễn Minh Hương	F	3/2024	5/2024
22	ICT2.012	Software Testing and Quality Assurance	3	30	20	10		O	Kristina Sargsyan	I	1/2024	4/2024

ANNEX 20: TEACHING PLAN OF THE DOUBLE DEGREE BACHELOR PROGRAM IN CHEMISTRY IN 2023-2024
 (Promulgated with Decision No. *716* /QĐ-ĐHKHCN dated *August 22nd*, 2023 on approving the Teaching plan of bachelor programs
 of University of Science and Technology of Hanoi in academic year 2023-2024)

TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	CH2.001	Analytical Chemistry	2	28				M	Christophe Pichon, Bùi Văn Hối	F+I	9/2023	01/2024
2	CH2.002	Analytical Chemistry Lab	3	45	1	44		M	Bùi Văn Hối, Lê Văn Hoàng	F+I	9/2023	01/2024
3	CH2.003	Inorganic Chemistry 1	2	24	18		6	M	Nguyễn Thị Quyên, Trần Bữu Đăng	F+I	9/2023	01/2024
4	CH2.004	Inorganic Chemistry 2	2	24	18		6	M	Nguyễn Thị Quyên, Gilles LeMercier	F+I	9/2023	01/2024
5	CH2.005	Instrumental Analysis 1	3	36	30		6	M	Tô Hải Tùng	F	9/2023	01/2024
6	CH2.006	Organic Chemistry 2	3	36	24		12	M	Nguyễn Đức Anh	F	9/2023	01/2024
7	CH2.007	Physical Chemistry 1	2	24	20		4	M	Nguyễn Thị Tuyết Mai, Trần Bữu Đăng	F+I	9/2023	01/2024
8	CH2.008	Physical Chemistry 2	2	24	18		6	M	Ha Vinh Lam Nguyen, Trần Bữu Đăng	I	9/2023	01/2024
9	CH2.009	Project-based course 1	3	36	24	12		M	Lê Thị Lý, Lê Văn Hoàng	F+I	9/2023	01/2024

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No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	FR2.003	French double degree 4	7	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	11/2023
11	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
12	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
13	CH3.003	Biochemistry and Bioinorganic Chemistry	3	36	30	6		M	Phạm Hồng Ngọc	F	02/2024	7/2024
14	CH2.012	Instrumental Analysis 2	3	36	24		12	M	Lê Thị Lý	F	02/2024	7/2024
15	CH2.013	Organic Chemistry Lab	3	45	5	40		M	Tô Hải Tùng, Phạm Hồng Ngọc, Nguyễn Đức Anh, Vũ Thị Trang	F+I	02/2024	7/2024
16	CH2.014	Organic Synthesis	3	36	30			M	Tô Hải Tùng, Albert Nguyen Van Nhien	F+I	02/2024	7/2024
17	AMS2.015	Physicochemistry of Interfaces	3	30				M	Vũ Thị Thu	F	02/2024	7/2024
18	CH2.016	Polymer Chemistry	3	36	30		6	M	Nguyễn Đức Anh	F	02/2024	7/2024
19	CH2.017	Project-based course 2	3	36	6	30		M	Lê Thị Lý, Nguyễn Thị Quyên, Nguyễn Ngọc Đức	F	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
20	CH3.006	Structure Determination	3	36	24		12	M	Tô Hải Tùng	F	02/2024	7/2024
21	CH2.019	Inorganic Chemistry Labwork	2	30		30		M	Nguyễn Thị Quyên, Phạm Hồng Ngọc	F	02/2024	7/2024
22	CH2.020	Physical Chemistry Labwork	2	30		30		M	Nguyễn Ngọc Đức, Trần Bữu Đăng	F+I	02/2024	7/2024
23	FR2.004	French double degree 5	0	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	01/2024	4/2024
24	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

ANNEX 21: TEACHING PLAN OF THE DOUBLE DEGREE BACHELOR PROGRAM IN BIOTECHNOLOGY - DRUG DISCOVERY

IN 2023-2024,

*(Promulgated with Decision No. **716** /QĐ-ĐHKHCN dated **August 22nd**, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)*

TEACHING PLAN OF B2

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	BIT2.007	Organic Chemistry	3	30	24	0	6	M	Trần Tuấn Anh	F	9/2023	02/2024
2	BIT2.002	Biochemistry 2	4	40	32	8	6	M	Nguyễn Phương Nga Lê Thị Thu Hằng	F	9/2023	02/2024
3	BIT2.003	Bioanalytical Chemistry	3	35	19	6	10	M	Nguyễn Thị Kiều Oanh Lê Hồng Luyến	F	9/2023	02/2024
4	BIT2.005	Integrated Physiology part 2 (Plant)	3	30	27	0	3	M	Lê Thị Vân Anh	F	9/2023	02/2024
5	BIT2.008	Principles of Immunology	4	40	32	0	8	M	Trần Thị Thu Phương	F	9/2023	02/2024
6	BIT2.012	Introduction to Enzymology	4	40	31	9	0	M	Nguyễn Sỹ Lê Thanh Mai Thị Phương Nga Lê Thị Thu Hằng	F+I	9/2023	02/2024
7	BIT2.001	Molecular Biology	4	48	40	8	0	M	Mai Thị Phương Nga, Trần Thị Thanh Tâm	F	9/2023	02/2024
8	MST2.002	Advanced Cell Biology	3	40	24	8	8	O	Mai Thị Phương Nga, Nguyễn Thị Trang Huyền	F	9/2023	02/2024
9	FR2.003	French double degree 4	7	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	9/2023	11/2023

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
10	PHI2.001	Philosophy	0	30	30			M	Trần Xuân Bình	I	9/2023	02/2024
11	MS2.005	Basic Principles of Project Management	2	20	20			O	Nguyễn Văn Hùng	I	9/2023	02/2024
Semester 2												
12	BIT2.004	Biostatistics	3	33	24	0	9	M	Nguyễn Thị Vân Anh	F	02/2024	7/2024
13	BIT2.009	Applied Microbiology	3	40	24	16	0	M	Tô Thị Mai Hương Nguyễn Quang Huy Nguyễn Văn Phụng Nghiên cứu sinh USTH	F	02/2024	7/2024
14	BIT2.010	Integrated Physiology part 1 (Animal)	3	39	27	9	3	M	Tepmanas Bupha-Intr Nguyễn Thị Trang Huyền	F+I	02/2024	7/2024
15	BIT2.006	Introduction to Plant Cell Biotechnology	3	30	18	12	0	M	Lê Thị Vân Anh	F	02/2024	7/2024
16	BIT3.010	Introduction to food science and technology	3	36	27	9	0	M	Tô Thị Mai Hương Phạm Hoàng Nam	F	02/2024	7/2024
17	BIT2.016	Drug development and medicinal chemistry	4	42	36	6	0	M	Nguyễn Thị Kiều Oanh Nguyễn Hải Đăng Phạm Thế Hải	F	02/2024	7/2024
18	BIT2.014	Developmental Biology	3	30	21	0	9	O	Siripong Thitamadee	I	02/2024	7/2024
19	BIT2.015	Frontiers in Marine Biology	3	30	30	0	0	O	Lee Sang Hoon	I	02/2024	7/2024
20	BIT2.017	Plant Genetics and Breedings	3	30	25	0	5	O	Nguyễn Văn Phụng	F	02/2024	7/2024
21	BIT2.019	Basics on Phytomedicine and Natural Product Drugs	3	30	20	10	0	O	Lê Hồng Luyến	F	02/2024	7/2024
22	MST2.007	Medical Virology	3	40	28	6	6	O	Nguyễn Thị Thường	I	02/2024	7/2024

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
23	BIT2.020	Introduction to Ecological Agriculture	3	30	20	8	2	O	Nguyễn Văn Phương Phạm Hoàng Nam	F	02/2024	7/2024
24	FR2.004	French double degree 5	0	130	130			M	Trần Thị Phương Thảo, Nguyễn Tuấn Anh, Phạm Thị Huyền, Trương Thị Khánh Hòa, Nguyễn Thùy Linh, Phạm Lê Huy, invited lecturers	F+I	01/2024	4/2024
25	MS2.006	Intellectual Property Management	2	20	18		2	O	Lê Thị Thu Hiền	I	02/2024	6/2024

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ANNEX 22: TEACHING PLAN OF THE PREPARATION YEAR (B0) OF BACHELOR PROGRAMS IN 2023-2024

(Promulgated with Decision No. 716 /QĐ-ĐHKHCN dated August 22nd, 2023 on approving the Teaching plan of bachelor programs of University of Science and Technology of Hanoi in academic year 2023-2024)

No.	Module Code	Modules	ECTS	Total teaching hours	Lecture Hours	Practical Hours	Tutorial Hours	Mandatory module (M)/ Optional module (O)	Lecturers	USTH fulltime lecturer (F)/ Invited lecturer (I)	Start Date	End Date
Semester 1												
1	ENG0.001	English Stage 01	14	180	180			M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, inviting lecturers	F+I	9/2023	12/2023
2	ENG0.002	English Stage 02	14	180	180			M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, inviting lecturers	F+I	12/2023	03/2024
Semester 2												
3	ENG0.003	English Stage 03	12	140	140			M	Nguyễn Thị Ngọc Thảo, Nguyễn Hồng Nga, Nguyễn Ngọc Anh, Đỗ Thùy Linh, Bùi Phương Hà, inviting lecturers	F+I	3/2024	6/2024
4	MAT0.001	Mathematics	4	40	40			M	Trần Hoàng Tùng, Nguyễn Mai Chung, Lương Thái Hưng	F	02/2024	6/2024
5	PHY0.001	Physics	4	40	40			M	Lê Thị Lý, Trịnh Bích Ngọc, Nguyễn Hồng Nam, Nguyễn Thị Ngọc, Nguyễn Mai Chung	F	02/2024	6/2024
6	CHE0.001	Chemistry	4	40	30		8	M	Lê Hồng Luyện, Lê Phương Thu, Vũ Cẩm Tú	F	02/2024	6/2024
7	BIO0.001	Biology	4	40	30		6	M	Lê Thị Vân Anh, Nguyễn Quỳnh Hoa, Lê Thanh Hương, Nguyễn Thy Ngọc	F	02/2024	6/2024
8	ICT0.001	Informatics	4	40	40			M	Lê Hữu Tôn, Nguyễn Hoàng Hà, Nguyễn Minh Hương	F	02/2024	6/2024

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