# Study program 2849 M Control analytical methods (Kontrolné analytické metódy)

# Curriculum valid from 1.9.2023

Categories and names		N	umber of	weekly le	ssons per	year
of educational fields	Abbreviation in schedule	1.	2.	3.	4.	Total
GENERAL EDUCATION		19	16	16	12	63
Language and communication		24	+ 9 applic	able less	ons	33
Slovak language and literature a)	SJL	3	3	3	3	12
First foreign language b) (English)	ANJ	3	3	2	2	10
Second foreign language b)	NEJ, SJA, RUJ	2	2	3		7
(German, Spanish, Russian)	,,			<u> </u>		·
Conversation in foreign language b)	KAJ			2	2	4
(English Conversation)	10.0					_
Man and values				2		2
Ethical / Religious education c)	ETV, NBV	1	1			2
Man and society				5		5
History	DEJ	2				2
Civic education	OBN	1	1	1		3
Man and science d)			;	3		3
Physics	FYZ	2	1			3
Mathematics and working with		6	+ 6 applica	ahle lesso	nc	12
information			. о аррис	ubic icsso	7113	
Mathematics e)	MAT	3	3	3	3	12
Health and exercise				3		8
Physical education g)	TSV	2	2	2	2	8
Applicable lessons k)			1	5		15
PROFESSIONAL EDUCATION		14	18	18	21	71
Theoretical education h)		36	+ 4 applic	able lesso	ons	40
Economics	EKO			2	2	4
Chemistry (general and inorganic,	CHE	4	4	4		12
organic, physical)		7	7	-		
Analytical chemistry	ACH		2	2		4
Chemical calculations	CVY	2	2			4
Biochemistry	BOC			2	3	5
Microbiology	MBI		2	2		4
Molecular biology	MOL				2	2
Clinical chemistry and analysis	КСВ				3	3
Nuclear medicine	NUM				2	2
Practical education i)			3	1		31
Applied biology	APB	3	2			5
Applied informatics f)	API	2	2	2		6
Chemical laboratory exercises	CLC	3	4	4	4	15
Professional practice j)	PRX				5	5
Applicable lessons k)				1		4
Total applicable lessons k)			14	+ 5		19
TOTAL		33	34	34	33	134

# Overview

Activity	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
Teaching according to the schedule p)	33	33	33	30
Final exam p)	-	-	-	1
Reserve time n), p)	7	6	6	6
Participating in professional events p)	-	1	1	-
Total number of weeks	40	40	40	37

### **Curriculum notes**

- a. The teaching of Slovak language and literature is carried out with a minimum of 3 lessons per week in each year.
- b. One of the following foreign languages is taught: English, German, French, Russian, Spanish, Italian. According to the needs and conditions of the school, other foreign languages. The teaching of a foreign language shall be carried out with a minimum of 3 lessons per week in each year. Another foreign language may be taught as an optional subject from the applicable lessons. The class is divided into groups for each lesson with a minimum of 24 pupils.
- c. Subjects of ethics/religious education are taught according to the interest of pupils in groups of no more than 20 pupils. Pupils from different classes of the same year may be combined for the teaching of the subject of ethics or religious education and groups may be formed with a maximum of 20 pupils. If the number of pupils in a group falls below 12, pupils from different years may also be combined in groups. In denominational schools, the subject of religion (according to denomination) is a compulsory part of the educational area 'Man and Values'. The school may teach the subject of ethics education as an optional subject.
- d. Subjects of physics, chemistry, biology, which are selected and taught according to their purpose in the study programme. If the school teaches the subject of chemistry in connection with a specific study programme, (i.e. applied chemistry), the performance and content standards of the general education subject of chemistry shall be included in the performance and content standards of the subject of applied chemistry and the allocation of lessons shall be moved from the category of general education subjects to the category of professional subjects.
- e. Mathematics shall be taught with a minimum allocation of 1.5 lessons per week in each year.
- f. If the school teaches computer science in connection with a specific study programme (i.e. applied computer science), the allocation of 2 lessons per week will be moved from the category of general education subjects to the category of professional subjects. In the subject of computer science (applied computer science), the class is divided into groups, the maximum number of pupils in a group is 15. Another group will be formed only after the previous group has been filled to the maximum number of pupils.
- g. The subject of physical and sport education can also be taught in the afternoon and combined into multi-lesson units. The class shall be divided into groups for each lesson with a minimum of 24 pupils.
- h. Subjects shall be taught in groups for 16 lessons per week for the entire course of study in a given class, in a given study program and each year, with a minimum of 6 and a maximum of 11 pupils per group.
- i. Subjects shall be taught in the form of practical exercises. They shall be taught in groups in a given class, in a given study programme and each year, the number of pupils in a group being a minimum of 5 and a maximum of 9.
- j. In the apprenticeship, pupils are divided into groups, particularly regarding health and safety at work and hygiene requirements according to generally applicable legislation. The subject is taught in groups, with a minimum of 5 and a maximum of 9 pupils per group. The subject vocational practice includes a continuous work experience, which pupils complete during their studies in the third year of

- study, for 10 working days of 7 hours per day. The practical training shall include the content of the chemical hazard management course and the practical environmental education course.
- k. The applicable lessons are common for general and professional education and will be used by the school when refining the school curriculum. They can be used to reinforce the lesson allocation of the core curriculum (compulsory subjects) or to include additional extension curriculum (optional subjects) in the curriculum. Their use is decided by the school management based on the school's own concept of education and training as proposed by subject committees and after prior discussion in the pedagogical council.
- I. In classrooms where the language of an ethnic minority is taught, the subject of the language of an ethnic minority and literature is a compulsory part of the educational area "Language and communication" with a minimum allocation of 2 lessons per week.
- m. The headmaster, after discussion with the pedagogical board and the school council, shall decide which subjects within theoretical teaching and practical teaching may be combined into multi-lesson units.
- n. The education and training of pupils includes a course on the protection of life and health, and a course on physical activities in nature may also be organised. The life and health protection course has separate thematic units with the following content: emergency response civil protection, health training, stay and exercise in nature, technical activities of interest and sports. It is organised in the third year of studies and lasts three days of 6 hours each. The exercises are part of the cross-cutting theme of Protection of Life and Health. They take place in year 1 and year 2 during school time for 6 hours once in each half-term of the school year. The outdoor physical activity course takes the form of a ski course, a snowboarding course, a swimming course, a hiking course, or a course in other outdoor sports.
- o. Vocational secondary schools for pupils with disabilities fulfil the same objectives as vocational secondary schools for able-bodied pupils. The general educational objectives in the individual educational areas and competences are adapted to the individual characteristics of pupils with disabilities to the extent that the results correspond to the profile of the graduate. The specifics of the education and training of pupils with disabilities (duration, forms of education and training, conditions of admission, organisational conditions for education and training, staffing, material, and technical and spatial provision, etc.) are laid down in educational programmes drawn up according to the type of disability.
- p. The number of weekly lessons in school education programmes is a minimum of 132 lessons and a maximum of 140 lessons for the entire course of study. Teaching is carried out in years 1, 2 and 3 over a period of 33 weeks, and in year 4 over a period of 30 weeks. The time reserve will be used for revision and supplementing the curriculum, for courses on life and health protection and courses on outdoor physical activities, etc. and in the final year for the final examination.

# Source documents:

- a. STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of study and teaching disciplines 28 TECHNICAL AND APPLIED CHEMISTRY. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. (ŠTÁTNY VZDELÁVACCÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom.)
- b. APPENDIX No. 6 for the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of study and teaching fields 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under No. 2013-762/1878:19-925 with effect from 1 September 2013. Approved by the Ministry of Education, Science,

Research and Sport of the Slovak Republic on 12 December 2018 under number 2018/1465:44-10E0 with effect from 1 September 2020 starting with the first year.

(DODATOK č. 6 pre ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 12. decembra 2018 pod číslom 2018/1465:44-10E0 s účinnosťou od 1. septembra 2020 začínajúc prvým ročníkom.)

# Study program 2840 M Biotechnology and pharmacology (Biotechnológia a farmakológia)

Curriculum valid from 1.9.2023

Categories and names		Number of weekly lessons per ye				ear
of educational fields	Abbreviation in schedule	1.	2.	3.	4.	Total
GENERAL EDUCATION		19	16	15	14	64
Language and communication		24	+ 10 appli	cable less	ons	34
Slovak language and literature a)	SJL	3	3	3	3	12
First foreign language b) (English)	ANJ	3	3	2	2	10
Second foreign language b) (German, Spanish, Russian)	NEJ, SJA, RUJ	2	2	2	2	8
Conversation in foreign language b) (English Conversation)	KAJ			2	2	4
Man and values			2	2		2
Ethical / Religious education c)	ETV, NBV	1	1			2
Man and society			ļ	5		5
History	DEJ	2				2
Civic education	OBN	1	1	1		3
Man and science d)			3	3		3
Physics	FYZ	2	1			3
Mathematics and working with information		6 + 6 applicable lessons			ns	12
Mathematics e)	MAT	3	3	3	3	12
Health and exercise				8		8
Physical education g)	TSV	2	2	2	2	8
Applicable lessons k)			1	.6		16
PROFESSIONAL EDUCATION		14	18	20	20	72
Theoretical education h)		36	+ 2 applic	able lesso	ns	38
Economics	EKO		2			2
Chemistry (general and inorganic, organic, physical)	CHE	4	4	3		11
Analytical chemistry	ACH				2	2
Chemical calculations	CVY	2	2			4
Biochemistry	BOC			2	2	4
Microbiology	MBI		1	1		2
Fundamentals of technology	ZTG		2			2
Biotechnology	BIT			2	2	4
Chemistry of drugs	CLV			2	2	4
Technology of dosage forms	TFL			1	2	3
Practical education i)		32	+ 2 applic	able lesso	ns	34
Applied biology	APB	3	2	2	2	9
Applied informatics f)	API	2	2	2	2	8
Chemical laboratory exercises	CLC	3	3			6
Professional practice j)	PRX			5	6	11
Applicable lessons k)			-	4		4
Total applicable lessons k)			14	+ 4		18
TOTAL		33	34	35	34	136

### Overview

Activity	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
Teaching according to the schedule p)	33	33	33	30
Final exam p)	-	-	-	1
Reserve time n), p)	7	6	6	6
Participating in professional events p)	-	1	1	-
Total number of weeks	40	40	40	37

### **Curriculum notes**

- a. The teaching of Slovak language and literature is carried out with a minimum of 3 lessons per week in each year.
- b. One of the following foreign languages is taught: English, German, French, Russian, Spanish, Italian. According to the needs and conditions of the school, other foreign languages. The teaching of a foreign language shall be carried out with a minimum of 3 lessons per week in each year. Another foreign language may be taught as an optional subject from the applicable lessons. The class is divided into groups for each lesson with a minimum of 24 pupils.
- c. Subjects of ethics/religious education are taught according to the interest of pupils in groups of no more than 20 pupils. Pupils from different classes of the same year may be combined for the teaching of the subject of ethics or religious education and groups may be formed with a maximum of 20 pupils. If the number of pupils in a group falls below 12, pupils from different years may also be combined in groups. In denominational schools, the subject of religion (according to denomination) is a compulsory part of the educational area 'Man and Values'. The school may teach the subject of ethics education as an optional subject.
- d. Subjects of physics, chemistry, biology, which are selected and taught according to their purpose in the study programme. If the school teaches the subject of chemistry in connection with a specific study programme, (i.e. applied chemistry), the performance and content standards of the general education subject of chemistry shall be included in the performance and content standards of the subject of applied chemistry and the allocation of lessons shall be moved from the category of general education subjects to the category of professional subjects.
- e. Mathematics shall be taught with a minimum allocation of 1.5 lessons per week in each year.
- f. If the school teaches computer science in connection with a specific study programme (i.e. applied computer science), the allocation of 2 lessons per week will be moved from the category of general education subjects to the category of professional subjects. In the subject of computer science (applied computer science), the class is divided into groups, the maximum number of pupils in a group is 15. Another group will be formed only after the previous group has been filled to the maximum number of pupils.
- g. The subject of physical and sport education can also be taught in the afternoon and combined into multi-lesson units. The class shall be divided into groups for each lesson with a minimum of 24 pupils.
- h. Subjects shall be taught in groups for 16 lessons per week for the entire course of study in a given class, in a given study program and each year, with a minimum of 6 and a maximum of 11 pupils per group.
- i. Subjects shall be taught in the form of practical exercises. They shall be taught in groups in a given class, in a given study programme and each year, the number of pupils in a group being a minimum of 5 and a maximum of 9.
- j. In the apprenticeship, pupils are divided into groups, particularly regarding health and safety at work and hygiene requirements according to generally applicable legislation. The subject is taught in groups, with a minimum of 5 and a maximum of 9 pupils per group. The subject vocational practice includes a continuous work experience, which pupils complete during their studies in the third year of

- study, for 10 working days of 7 hours per day. The practical training shall include the content of the chemical hazard management course and the practical environmental education course.
- k. The applicable lessons are common for general and professional education and will be used by the school when refining the school curriculum. They can be used to reinforce the lesson allocation of the core curriculum (compulsory subjects) or to include additional extension curriculum (optional subjects) in the curriculum. Their use is decided by the school management based on the school's own concept of education and training as proposed by subject committees and after prior discussion in the pedagogical council.
- I. In classrooms where the language of an ethnic minority is taught, the subject of the language of an ethnic minority and literature is a compulsory part of the educational area "Language and communication" with a minimum allocation of 2 lessons per week.
- m. The headmaster, after discussion with the pedagogical board and the school council, shall decide which subjects within theoretical teaching and practical teaching may be combined into multi-lesson units.
- n. The education and training of pupils includes a course on the protection of life and health, and a course on physical activities in nature may also be organised. The life and health protection course has separate thematic units with the following content: emergency response civil protection, health training, stay and exercise in nature, technical activities of interest and sports. It is organised in the third year of studies and lasts three days of 6 hours each. The exercises are part of the cross-cutting theme of Protection of Life and Health. They take place in year 1 and year 2 during school time for 6 hours once in each half-term of the school year. The outdoor physical activity course takes the form of a ski course, a snowboarding course, a swimming course, a hiking course, or a course in other outdoor sports.
- o. Vocational secondary schools for pupils with disabilities fulfil the same objectives as vocational secondary schools for able-bodied pupils. The general educational objectives in the individual educational areas and competences are adapted to the individual characteristics of pupils with disabilities to the extent that the results correspond to the profile of the graduate. The specifics of the education and training of pupils with disabilities (duration, forms of education and training, conditions of admission, organisational conditions for education and training, staffing, material, and technical and spatial provision, etc.) are laid down in educational programmes drawn up according to the type of disability.
- p. The number of weekly lessons in school education programmes is a minimum of 132 lessons and a maximum of 140 lessons for the entire course of study. Teaching is carried out in years 1, 2 and 3 over a period of 33 weeks, and in year 4 over a period of 30 weeks. The time reserve will be used for revision and supplementing the curriculum, for courses on life and health protection and courses on outdoor physical activities, etc. and in the final year for the final examination.

# Source documents:

- c. STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of study and teaching disciplines 28 TECHNICAL AND APPLIED CHEMISTRY. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. (ŠTÁTNY VZDELÁVACCÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom.)
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# Curriculum valid from 1.9.2020

Categories and names		Nu	umber of v	weekly cla	sses per y	ear
of educational fields	Abbreviation in schedule	1.	2.	3.	4.	Total
GENERAL EDUCATION		19	16	15	14	64
Language and communication		24	+ 12 appli	cable clas	ses	36
Slovak language and literature a)	SJL	3	3	3	3	12
First foreign language b) (English)	ANJ, NEJ	3	3	3	3	12
Second foreign language b) (German, Spanish, Russian)	ANJ, NEJ	2	2	2	2	8
Conversation in foreign language b) (English Conversation)	KAJ, KNJ			2	2	4
Man and values				2		2
Ethical / Religious education c)	ETV, NBV	1	1			2
Man and society			ļ	5		5
History	DEJ	2				2
Civic education	OBN	1	1	1	0	3
Man and science d)			:	3		3
Physics	FYZ	2	1			3
Mathematics and working with information		6	+ 4 applic	able class	es	10
Mathematics e)	MAT	3	3	2	2	10
Health and exercise				<u> </u>	I	8
Physical education g)	TSV	2	2	2	2	8
Applicable lessons k)			1	.6	<u>I</u>	16
PROFESSIONAL EDUCATION		15	19	20	20	74
Theoretical education h)		36	+ 4 appli	cable class	es	40
Economics	EKO		2			2
Chemistry (general and inorganic, organic, physical)	CHE	4	4	3		11
Analytical chemistry	ACH				2	2
Chemical calculations	CVY	2	2			4
Biotechnology	BOC			2	2	4
Toxicology	TOX	1	1			2
Microbiology	MBI		1	1		2
Fundamentals of technology	ZTG		2			2
Biotechnology	BIT			2	2	4
Chemistry of drugs	CLV			2	2	4
Technology of dosage forms	TFL			1	2	3
Practical education i)		32 + 2 applicable classes			es	34
Applied biology	APB	3	2	2	2	9
Applied informatics f)	API	2	2	2	2	8
Chemical laboratory exercises	CLC	3	3			6
Professional practice j)	PRX			5	6	11
Applicable classes k)				5		4
Total applicable classes k)				+ 8		22
TOTAL		34	35	35	34	138

### Overview

Activity	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
Teaching according to the schedule p)	33	33	33	30
Final exam p)	-	-	-	1
Reserve time n), p)	7	6	6	6
Participating in professional events p)	-	1	1	-
Total number of weeks	40	40	40	37

### **Curriculum notes**

- a. The teaching of Slovak language and literature is carried out with a minimum of 3 lessons per week in each year.
- b. One of the following foreign languages is taught: English, German, French, Russian, Spanish, Italian. According to the needs and conditions of the school, other foreign languages. The teaching of a foreign language shall be carried out with a minimum of 3 lessons per week in each year. Another foreign language may be taught as an optional subject from the applicable lessons. The class is divided into groups for each lesson with a minimum of 24 pupils.
- c. Subjects of ethics/religious education are taught according to the interest of pupils in groups of no more than 20 pupils. Pupils from different classes of the same year may be combined for the teaching of the subject of ethics or religious education and groups may be formed with a maximum of 20 pupils. If the number of pupils in a group falls below 12, pupils from different years may also be combined in groups. In denominational schools, the subject of religion (according to denomination) is a compulsory part of the educational area 'Man and Values'. The school may teach the subject of ethics education as an optional subject.
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- e. Mathematics shall be taught with a minimum allocation of 1.5 lessons per week in each year.
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- study, for 10 working days of 7 hours per day. The practical training shall include the content of the chemical hazard management course and the practical environmental education course.
- k. The applicable lessons are common for general and professional education and will be used by the school when refining the school curriculum. They can be used to reinforce the lesson allocation of the core curriculum (compulsory subjects) or to include additional extension curriculum (optional subjects) in the curriculum. Their use is decided by the school management based on the school's own concept of education and training as proposed by subject committees and after prior discussion in the pedagogical council.
- I. In classrooms where the language of an ethnic minority is taught, the subject of the language of an ethnic minority and literature is a compulsory part of the educational area "Language and communication" with a minimum allocation of 2 lessons per week.
- m. The headmaster, after discussion with the pedagogical board and the school council, shall decide which subjects within theoretical teaching and practical teaching may be combined into multi-lesson units.
- n. The education and training of pupils includes a course on the protection of life and health, and a course on physical activities in nature may also be organised. The life and health protection course has separate thematic units with the following content: emergency response civil protection, health training, stay and exercise in nature, technical activities of interest and sports. It is organised in the third year of studies and lasts three days of 6 hours each. The exercises are part of the cross-cutting theme of Protection of Life and Health. They take place in year 1 and year 2 during school time for 6 hours once in each half-term of the school year. The outdoor physical activity course takes the form of a ski course, a snowboarding course, a swimming course, a hiking course, or a course in other outdoor sports.
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# Source documents:

- e. STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of study and teaching disciplines 28 TECHNICAL AND APPLIED CHEMISTRY. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. (ŠTÁTNY VZDELÁVACCÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom.)
- f. APPENDIX No. 6 for the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of study and teaching fields 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under No. 2013-762/1878:19-925 with effect from 1 September 2013. Approved by the Ministry of Education, Science,

Research and Sport of the Slovak Republic on 12 December 2018 under number 2018/1465:44-10E0 with effect from 1 September 2020 starting with the first year.

(DODATOK č. 6 pre ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 12. decembra 2018 pod číslom 2018/1465:44-10E0 s účinnosťou od 1. septembra 2020 začínajúc prvým ročníkom.)

# Study program 2847 M Technology of cosmetics and pharmaceutical products (Technológia kozmetiky a chemických liečiv)

Curriculum valid from 1.9.2023

Categories and names		Nu	ımber of v	weekly cl	asses per	year
of educational fields	Abbreviation in schedule	1.	2.	3.	4.	Total
GENERAL EDUCATION		19	16	14	13	62
Language and communication		24	+ 10 appl	icable cla	sses	34
Slovak language and literature a)	SJL	3	3	3	3	12
First foreign language b) (English)	ANJ	3	3	2	2	10
Second foreign language b) (German,	NEJ, SJA, RUJ	2	2	2	2	8
Spanish, Russian)	NEJ, SJA, KOJ					0
Conversation in foreign language b)	KAJ			2	2	4
(English Conversation)	KAJ					4
Man and values				2		2
Ethical / Religious education c)	ETV, NBV	1	1			2
Man and society				5		5
History	DEJ	2				2
Civic education	OBN	1	1	1	0	3
Man and science d)				3		3
Physics	FYZ	2	1			3
Mathematics and working with		c	ı 6 annlis	abla slas		12
information		ь	+ 6 applic	able clas	ses	12
Mathematics e)	MAT	3	3	3	3	12
Health and exercise				8		8
Physical education g)	TSV	2	2	2	2	8
Applicable lessons k)			1	<b>.</b> 6		16
PROFESSIONAL EDUCATION		14	18	20	20	72
Theoretical education h)		36	+ 4 appli	cable cla	sses	40
Economics	EKO		2	2	1	5
Chemistry (general and inorganic,	CHE	4	4	3		11
organic, physical)	СПЕ	4	4	3		11
Analytical chemistry	ACH				3	3
Chemical calculations	CVY	2	2			4
Biochemistry	BOC			2	2	4
Cosmetic chemistry	KEC		3			3
Cosmetic technology	KDT			1	2	3
Chemistry of drugs	CLV			2	2	4
Technology of dosage forms	TFL			1	2	3
Practical education i)			3	32		32
Applied biology	APB	3	2	2	1	8
Applied informatics f)	API	2	2	2	2	8
Chemical laboratory exercises	CLC	3	3			6
Professional practice	PRX			5	5	10
Applicable classes k)				4		4
Total applicable classes k)			14	+ 6		20
TOTAL		33	34	35	34	136

Stredná odborná škola chemická, Vlčie hrdlo 50, 821 07 Bratislava Study program 2847 M Technology of cosmetics and pharmaceutical products (Technológia kozmetiky a chemických liečiv)

## Overview

Activity	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
Teaching according to the schedule p)	33	33	33	30
Final exam p)	-	-	-	1
Reserve time n), p)	7	6	6	6
Participating in professional events p)	-	1	1	-
Total number of weeks	40	40	40	37

### **Curriculum notes**

- a. The teaching of Slovak language and literature is carried out with a minimum of 3 lessons per week in each year.
- b. One of the following foreign languages is taught: English, German, French, Russian, Spanish, Italian. According to the needs and conditions of the school, other foreign languages. The teaching of a foreign language shall be carried out with a minimum of 3 lessons per week in each year. Another foreign language may be taught as an optional subject from the applicable lessons. The class is divided into groups for each lesson with a minimum of 24 pupils.
- c. Subjects of ethics/religious education are taught according to the interest of pupils in groups of no more than 20 pupils. Pupils from different classes of the same year may be combined for the teaching of the subject of ethics or religious education and groups may be formed with a maximum of 20 pupils. If the number of pupils in a group falls below 12, pupils from different years may also be combined in groups. In denominational schools, the subject of religion (according to denomination) is a compulsory part of the educational area 'Man and Values'. The school may teach the subject of ethics education as an optional subject.
- d. Subjects of physics, chemistry, biology, which are selected and taught according to their purpose in the study programme. If the school teaches the subject of chemistry in connection with a specific study programme, (i.e. applied chemistry), the performance and content standards of the general education subject of chemistry shall be included in the performance and content standards of the subject of applied chemistry and the allocation of lessons shall be moved from the category of general education subjects to the category of professional subjects.
- e. Mathematics shall be taught with a minimum allocation of 1.5 lessons per week in each year.
- f. If the school teaches computer science in connection with a specific study programme (i.e. applied computer science), the allocation of 2 lessons per week will be moved from the category of general education subjects to the category of professional subjects. In the subject of computer science (applied computer science), the class is divided into groups, the maximum number of pupils in a group is 15. Another group will be formed only after the previous group has been filled to the maximum number of pupils.
- g. The subject of physical and sport education can also be taught in the afternoon and combined into multi-lesson units. The class shall be divided into groups for each lesson with a minimum of 24 pupils.
- h. Subjects shall be taught in groups for 16 lessons per week for the entire course of study in a given class, in a given study program and each year, with a minimum of 6 and a maximum of 11 pupils per group.
- i. Subjects shall be taught in the form of practical exercises. They shall be taught in groups in a given class, in a given study programme and each year, the number of pupils in a group being a minimum of 5 and a maximum of 9.
- j. In the apprenticeship, pupils are divided into groups, particularly regarding health and safety at work and hygiene requirements according to generally applicable legislation. The subject is taught in groups, with a minimum of 5 and a maximum of 9 pupils per group. The subject vocational practice

includes a continuous work experience, which pupils complete during their studies in the third year of study, for 10 working days of 7 hours per day. The practical training shall include the content of the chemical hazard management course and the practical environmental education course.

- k. The applicable lessons are common for general and professional education and will be used by the school when refining the school curriculum. They can be used to reinforce the lesson allocation of the core curriculum (compulsory subjects) or to include additional extension curriculum (optional subjects) in the curriculum. Their use is decided by the school management based on the school's own concept of education and training as proposed by subject committees and after prior discussion in the pedagogical council.
- I. In classrooms where the language of an ethnic minority is taught, the subject of the language of an ethnic minority and literature is a compulsory part of the educational area "Language and communication" with a minimum allocation of 2 lessons per week.
- m. The headmaster, after discussion with the pedagogical board and the school council, shall decide which subjects within theoretical teaching and practical teaching may be combined into multi-lesson units.
- n. The education and training of pupils includes a course on the protection of life and health, and a course on physical activities in nature may also be organised. The life and health protection course has separate thematic units with the following content: emergency response civil protection, health training, stay and exercise in nature, technical activities of interest and sports. It is organised in the third year of studies and lasts three days of 6 hours each. The exercises are part of the cross-cutting theme of Protection of Life and Health. They take place in year 1 and year 2 during school time for 6 hours once in each half-term of the school year. The outdoor physical activity course takes the form of a ski course, a snowboarding course, a swimming course, a hiking course, or a course in other outdoor sports.
- o. Vocational secondary schools for pupils with disabilities fulfil the same objectives as vocational secondary schools for able-bodied pupils. The general educational objectives in the individual educational areas and competences are adapted to the individual characteristics of pupils with disabilities to the extent that the results correspond to the profile of the graduate. The specifics of the education and training of pupils with disabilities (duration, forms of education and training, conditions of admission, organisational conditions for education and training, staffing, material, and technical and spatial provision, etc.) are laid down in educational programmes drawn up according to the type of disability.
- p. The number of weekly lessons in school education programmes is a minimum of 132 lessons and a maximum of 140 lessons for the entire course of study. Teaching is carried out in years 1, 2 and 3 over a period of 33 weeks, and in year 4 over a period of 30 weeks. The time reserve will be used for revision and supplementing the curriculum, for courses on life and health protection and courses on outdoor physical activities, etc. and in the final year for the final examination.

# Source documents:

- a. STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of study and teaching disciplines 28 TECHNICAL AND APPLIED CHEMISTRY. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. (ŠTÁTNY VZDELÁVACCÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom.)
- b. APPENDIX No. 4 amending the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of study and teaching fields 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the

Stredná odborná škola chemická, Vlčie hrdlo 50, 821 07 Bratislava Study program 2847 M Technology of cosmetics and pharmaceutical products (Technológia kozmetiky a chemických liečiv)

Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under the number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 6 July 2017 under number 2017-1927/31919:26-10E0 with effect from 1 September 2017 commencing with the first year.

(DODATOK č. 4 ktorým sa mení ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 6. júla 2017 pod číslom 2017-1927/31919:26-10E0 s účinnosťou od 1. septembra 2017 začínajúc prvým ročníkom.)

c. APPENDIX No. 6 for the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of study and teaching fields 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under No. 2013-762/1878:19-925 with effect from 1 September 2013. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 12 December 2018 under number 2018/1465:44-10E0 with effect from 1 September 2020 starting with the first year.

(DODATOK č. 6 pre ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 12. decembra 2018 pod číslom 2018/1465:44-10E0 s účinnosťou od 1. septembra 2020 začínajúc prvým ročníkom.)

Curriculum valid from 1.9.2020

Categories and names		Nu	mber of v	veekly le	ssons per	year
of educational fields	Abbreviation in schedule	1.	2.	3.	4.	Total
GENERAL EDUCATION		19	16	15	14	64
Language and communication		24	+ 12 appl	icable les	ons	36
Slovak language and literature a)	SJL	3	3	3	3	12
First foreign language b) (English)	ANJ, NEJ	3	3	3	3	12
Second foreign language b) (German, Spanish, Russian)	ANJ, NEJ	2	2	2	2	8
Conversation in foreign language b) (English Conversation)	KAJ, KNJ			2	2	4
Man and values				2		2
Ethical / Religious education c)	ETV, NBV	1	1			2
Man and society				5		5
History	DEJ	2				2
Civic education	OBN	1	1	1	0	3
Man and science d)				3		3
Physics	FYZ	2	1			3
Mathematics and working with information		6	+ 4 applic	able leso	ons	10
Mathematics e)	MAT	3	3	2	2	10
Health and exercise				8	_	8
Physical education g)	TSV	2	2	2	2	8
Applicable lessons k)			1	.6		16
PROFESSIONAL EDUCATION		15	19	20	20	74
Theoretical education h)		36	+ 6 appli	cable les	ons	42
Economics	EKO		2	2	1	5
Chemistry (general and inorganic, organic, physical)	CHE	4	4	3		11
Analytical chemistry	ACH				3	3
Chemical calculations d)	CVY	2	2			4
Biochemistry	ВОС			2	2	4
Toxicology	TOX	1	1			2
Cosmetic chemistry	KEC		3			3
Cosmetic technology	KDT			1	2	3
Chemistry of drugs	CLV			2	2	4
Technology of dosage forms	TFL			1	2	3
Practical education i)			3	2		32
Applied biology	APB	3	2	2	1	8
Applied informatics f)	API	2	2	2	2	8
Chemical laboratory exercises	CLC	3	3			6
Professional practice j)	PRX			5	5	10
Applicable lessons I)				6		18
Total applicable lessons I)			14	+ 6		22
TOTAL		34	35	35	34	138

Stredná odborná škola chemická, Vlčie hrdlo 50, 821 07 Bratislava Study program 2847 M Technology of cosmetics and pharmaceutical products (Technológia kozmetiky a chemických liečiv)

## Overview

Activity	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
Teaching according to the schedule p)	33	33	33	30
Final exam p)	-	-	-	1
Reserve time n), p)	7	6	6	6
Participating in professional events p)	-	1	1	-
Total number of weeks	40	40	40	37

### **Curriculum notes**

- a. The teaching of Slovak language and literature is carried out with a minimum of 3 lessons per week in each year.
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- e. Mathematics shall be taught with a minimum allocation of 1.5 lessons per week in each year.
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- i. Subjects shall be taught in the form of practical exercises. They shall be taught in groups in a given class, in a given study programme and each year, the number of pupils in a group being a minimum of 5 and a maximum of 9.
- j. In the apprenticeship, pupils are divided into groups, particularly regarding health and safety at work and hygiene requirements according to generally applicable legislation. The subject is taught in groups, with a minimum of 5 and a maximum of 9 pupils per group. The subject vocational practice

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- p. The number of weekly lessons in school education programmes is a minimum of 132 lessons and a maximum of 140 lessons for the entire course of study. Teaching is carried out in years 1, 2 and 3 over a period of 33 weeks, and in year 4 over a period of 30 weeks. The time reserve will be used for revision and supplementing the curriculum, for courses on life and health protection and courses on outdoor physical activities, etc. and in the final year for the final examination.

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1. STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of study and teaching disciplines 28 TECHNICAL AND APPLIED CHEMISTRY. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. (ŠTÁTNY VZDELÁVACCÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1.

School Curriculum 19

septembra 2013 začínajúc prvým ročníkom.)

- 2. APPENDIX No. 4 amending the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of study and teaching fields 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under the number 2013-762/1878:19-925 with effect from 1 September 2013 starting with the first year. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 6 July 2017 under number 2017-1927/31919:26-10E0 with effect from 1 September 2017 starting with the first year.
  - (DODATOK č. 4 ktorým sa mení ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 6. júla 2017 pod číslom 2017-1927/31919:26-10E0 s účinnosťou od 1. septembra 2017 začínajúc prvým ročníkom.)
- 3. APPENDIX No.6 for the STATE EDUCATIONAL PROGRAMME for vocational education and training, group of fields of study and teaching 28 TECHNICAL AND APPLIED CHEMISTRY Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under the number 2013-762/1878:19-925 with effect from 1 September 2013. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 12 December 2018 under number 2018/1465:44-10E0 with effect from 1 September 2020 starting with the first year. (DODATOK č. 6 pre ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných a učebných odborov 28 TECHNICKÁ A APLIKOVANÁ CHÉMIA Schválený Ministerstvom školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1878:19-925 s účinnosťou od 1. septembra 2013. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 12. decembra 2018 pod číslom 2018/1465:44-10E0 s účinnosťou od 1.

septembra 2020 začínajúc prvým ročníkom.)

# Study program 3918 M 03 Technical lycee – bilingual study (Technické lyceum – bilingválne štúdium)

Curriculum valid from 1.9.2021

Categories and names	Abbreviation	Number of weekly lessons per year					
of educational fields	in schedule	1.	2.	3.	4.	5.	Total
GENERAL EDUCATION		34	18	16	17	11	86+10
Language and communication							58+1
Slovak language and literature d)	SJL	3	3	3	4		13
Second language of instruction d), r) (English)	ANJ	18	4	4	4	4	34
Foreign language d), g) (German, Spanish)	NEJ, SJA		3	3	3	3	12
Man and values							2
Ethical / Religious education d), h)	ETV, NBV	1	1				2
Man and society							5
History	DEJ	1	1				2
Civic education	OBN		1	1	1		3
Man and science							3+1
Physics	FYZ	2					2
Chemistry r)	CHE	2					2
Mathematics and working with							10+6
information							10+0
Mathematics d)	MAT	3	3	3	3	2	14
Informatics o)	INF	2					2
Health and exercise							8+2
Physical education d), m)	TEV	2	2	2	2	2	10
PROFESSIONAL EDUCATION		0	16	18	17	22	58+15
Theoretical education		0	11	9	6	9	24+11
Economics	EKO		2	2	2		6
Applied physics	APF		2				2
Applied chemistry d), r)	APC		3	3	3	3	12
Applied mathematics d)	APM					2	2
Chemical calculations d)	CVY		2	2			4
Analytical chemistry r)	ACH					2	2
The world of work	SEE				1		1
Technical and technological education	TEQ		2	2			4
Economic geography	HOG					2	2
Professional education		0	5	9	11	13	34+4
Technical and economic exercises	ECT						
0)				2	2	2	6
Software applications e), o)	SWE			3	4	5	12
Applied informatics o), r)	API		2	1			3
Chemical laboratory exercises e), o)	CLC		3	3	5	6	17
Professional practice o)					2 weeks	2 weeks	4 weeks
TOTAL		34	34	34	34	33	169

### **Curriculum notes**

- a) The curriculum framework defines the proportions between general and vocational education (theoretical and practical) and their mandatory minimum scope. This curriculum is the basis for the development of specific curricula for school education programmes, in which the educational areas will be developed into curricula for teaching subjects or modules. The number of teaching hours for each of the educational areas is the minimum necessary. In school education programmes, they may be expanded according to the needs of the disciplines and the intentions of the school from the capacity of the available hours.
- b) Vocational secondary schools for pupils with disabilities shall fulfil the same objectives as vocational secondary schools for able-bodied pupils. The general educational objectives in the individual educational fields and competences shall be adapted to the individual characteristics of pupils with disabilities to the extent that the final results correspond to the profile of the graduate. The specifics of the education and training of pupils with disabilities (duration, forms of education and training, conditions of admission, organisational conditions for education and training, staffing, material and technical and spatial provision, etc.) are laid down in educational programmes drawn up according to the type of disability.
- c) The number of weekly lessons in school education programmes shall be a minimum of 33 lessons and a maximum of 35 lessons, for the whole course of study a minimum of 132 lessons and a maximum of 140 lessons. Education in the study programmes shall be carried out in years 1, 2 and 3 over a period of 33 weeks, and in year 4 over a period of 30 weeks (an average of 32 weeks counts towards the total number of hours of study, the specification of the number of hours of study shall be the subject of the school curricula). The time reserve will be used for revision and extension, for courses on life and health protection and courses on outdoor physical activities, etc. and, in the final year, for the matriculation examination.
- d) The class may be divided into groups according to the needs of the study programmes and the conditions of the school.
- e) The headmaster, in consultation with the board of education and the school council, shall decide which subjects in theoretical education and practical training may be combined into multiple hour units.
- f) The teaching of the Slovak language and literature shall be carried out in the fields of study with a minimum of 3 lessons per week in each year.
- g) A second foreign language may be taught as an optional subject from the time allocation of available hours at a minimum of 3 weekly teaching lessons in years 1 and 2 and at a minimum of 2 weekly teaching lessons in years 3 and 4.
- h) The subjects of religious education in alternative with ethical education are a part of the educational field "Man and values". The subjects of ethics/religious education are taught according to the interest of the pupils in groups of no more than 20 pupils.
- i) The subject of history and civics is part of the educational field 'Man and society'.
- j) In religious schools, the subject of religion (according to the denomination of the founder) is a compulsory part of the educational area 'Man and Values'. The subject of ethics education may be taught by the school as an elective subject. The subject of history and civics is part of the educational area 'Man and society'.
- k) The subjects of physics, chemistry, biology and geography, which are taught according to their purpose in a given study programme, are part of the educational field "Man and Nature".
- I) The subjects of mathematics and computer science, which are taught according to their purpose in the field of study, are part of the educational field of 'Mathematics and information work'. Mathematics is taught at a minimum of 1 lesson per week in each year. In technical fields of study, mathematics shall be taught for a minimum of 1,5 lessons per week in each year. The subject of computer science is taught compulsorily if the school does not have a vocational subject of applied computer science.

- m) The subject of physical and sport education is part of the educational field "Health and excercise". The subject of physical and sport education may also be taught in the afternoon and combined into maximum two-lesson units.
- n) The assessment and classification of teaching subjects shall be regulated by generally applicable legislation.
- o) Practical training shall be carried out in accordance with generally applicable legislation. For the quality implementation of education, it is necessary to create conditions for the acquisition of the required practical skills and activities in the form of practical exercises (in laboratories, professional classrooms, etc.) and professional practice. Pupils may be divided into groups for practical exercises and professional practice, particularly regarding occupational safety and health and hygiene requirements under generally applicable legislation. The number of pupils per teacher is governed by generally applicable legislation.
- p) Available lessons are a means of modifying the curriculum in the school education programme and at the same time of internal and external differentiation of learning in secondary school. Their use is decided by the school management based on its own concept of education and training, according to the proposal of the subject committees and after discussion in the pedagogical council. They may be used to reinforce the lesson allocation of the core curriculum (compulsory subjects) or to include additional extension curriculum (optional subjects) in the curriculum. The available lessons are common to general and vocational education.
- q) The education and training of pupils shall include a course on the protection of life and health and a course on outdoor physical activities, which are specified in the curriculum of the school education programme. The course on protection of life and health has separate thematic units with the following content: dealing with emergencies civil protection, health training, stay and movement in nature, technical activities of interest and sports. It is organised in the third year of study and lasts three days of six hours each, or five days if it is carried out as a boarding course.
  - The exercises are part of the cross-cutting theme of Protection of Life and Health. They take place in years 1 and 2 during school time for six hours in each half-term of the school year.
  - The outdoor physical activity course shall take place over a period of five teaching days, with a minimum of 15 lessons. It shall be organised in the 1st year of study (focusing on winter sports) and in the 2nd year of study (focusing on summer sports).
- r) The subject is taught in the second language of instruction English.

## **Source documents**

- STATE EDUCATIONAL PROGRAMME FOR VOCATIONAL EDUCATION AND TRAINING Group of fields of study 39 SPECIAL TECHNICAL FIELDS. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under number 2013-762/1859:11-925 with effect from 1 September 2013 starting with the first year.
  - (ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu Skupina študijných odborov 39 ŠPECIÁLNE TECHNIICKÉ ODBORY. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1859:11-925 s účinnosťou od 1. septembra 2013 začínajúc prvým ročníkom.)
- 2. APPENDIX No.4 for the STATE EDUCATIONAL PROGRAMME for Vocational Education and Training, group of fields of study 39 SPECIAL TECHNICAL FIELDS Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 15 January 2013 under the number 2013-762/1859:11-925 with effect from 1 September 2013. Approved by the Ministry of Education, Science, Research and Sport of the Slovak Republic on 12 December 2018 under number 2018/1465:49-10E0 with effect from 1 September 2020 starting with the first year.
  - (DODATOK č. 4 pre ŠTÁTNY VZDELÁVACÍ PROGRAM pre odborné vzdelávanie a prípravu, skupinu študijných odborov 39 ŠPECIÁLNE TECHNICKÉ ODBORY Schválený Ministerstvom školstva, vedy,

výskumu a športu Slovenskej republiky dňa 15. januára 2013 pod číslom 2013-762/1859:11-925 s účinnosťou od 1. septembra 2013. Schválilo Ministerstvo školstva, vedy, výskumu a športu Slovenskej republiky dňa 12. decembra 2018 pod číslom 2018/1465:49-10E0 s účinnosťou od 1. septembra 2020 začínajúc prvým ročníkom.)