



## LITHUANIAN SPORTS UNIVERSITY

### STUDY MODULE PROGRAMME (SMP)

Module Code	S	273	B	19I	Accredited until				Renewal date		
	Branch of Science		Progr.	Registr. №.							

**Entitlement**

Athlete Training Technologies I

**Prerequisites**

Students must have completed the module “Sport and exercise physiology”

**Course (module) Learning Outcomes**

№.	Learning Outcomes	Teaching / Learning Methods	Assessment Methods
1	At the end of the module the student will be able to explain the principles of coaching, to develop programs of training stages, applying modern technologies of athlete training.	Exercise classes, Formal lecture, Literature analysis, Problem-based learning, Seminar	Case analysis (study), Individual work, Mid-term examination, Scientific paper (text) analysis, Test
2	At the end of the module, students will be able to describe and select appropriate teaching and learning methods to achieve their training goals.	Discussion, Exercise classes, Formal lecture, Individual project, Literature analysis, Seminar	Case analysis (study), Individual work, Mid-term examination, Seminar, Test

**Main aim**

On the basis of international level fundamental and applied interdisciplinary science and technologies, to train university level Bachelor of Sports, providing knowledge and skills necessary to work with athletes in the areas of sports coaching. In the course of their studies students will gain knowledge of sports mastery, skills in organizing competitions; they will learn how to establish and assess athletes’ powers and prepare coaching programmes, train people of different age and mastery.

**Summary**

The main aim of the module is to provide profound knowledge of athlete training theory based on the international achievements of fundamental and applied interdisciplinary science technologies, to teach creative and critical analysis of the latest athlete training technologies and mobile skills development methods, to develop practical skills of athlete training planning. Competences developed: versatile cognition and idea management; continuous professional training and personal development, development of educational environment; management of the athlete training process.

**Level of module**

Level of programme		Subject group (under the regulation of the area)
Cycle	Type	
First	Bachelor	

Mokslo sritis pagrindu

**Group under financial classification**

10.Dailė (mokytojai), teatras (mokytojai), muzika (mokytojai), pedagogika (auklėtojai, pedagogai), sportas (treneriai)

**Syllabus**

№.	Sections and themes	Responsible lecturer
1.	Sports Coaching	6 prof. habil.dr. Antanas Skarbalius
1.1	The Concept of Modern Coaching Technologies in Athletes. Coach Phenomenon	6 prof. habil.dr. Antanas Skarbalius
1.2	Sports Performance: Notational Analysis (Skills in Using Stat4Sport Platform)	6 prof. habil.dr. Antanas Skarbalius

№.	Sections and themes	Responsible lecturer
1.3	Training Structure. Warning-up technologies	6 prof. habil.dr. Antanas Skarbalius
1.4	Philosophy of Training and Fitness	6 prof. habil.dr. Antanas Skarbalius
1.5	Relationship Between Functional Capacity and Fitness	6 prof. habil.dr. Antanas Skarbalius
1.6	Sports Talent identification. Long-term Athletes Development	6 prof. habil.dr. Antanas Skarbalius
1.7	Coaching Methods and Exercises Taxonomy	6 prof. habil.dr. Antanas Skarbalius
1.8	Planning of Athletes Coaching: Periodization, Microcycle and Annual Plan Programming	6 prof. habil.dr. Antanas Skarbalius
1.9	Monitoring Training and Performance in Athletes. Skills of Monitoring Training Loads by Spreadsheet	6 prof. habil.dr. Antanas Skarbalius
1.10	Ergogenic Aids in Athletes Coaching	6 prof. habil.dr. Antanas Skarbalius
2.	Muscle strength and power	497 doc. dr. Nerijus Masiulis
2.1	Basic principles of muscle strength and power training	497 doc. dr. Nerijus Masiulis
2.2	Muscle adaptation to strength and power training. Causes of muscle hypertrophy	497 doc. dr. Nerijus Masiulis
2.3	Strength training methodology, basics of training programs and practical recommendations	497 doc. dr. Nerijus Masiulis
2.4	Neuromuscular adaptation to strength and power training. Physiological adaptation of tendons, bones and connective tissue to strength and power training	497 doc. dr. Nerijus Masiulis
2.5	Children's adaptation to resistance training. Women's adaptation to resistance training	497 doc. dr. Nerijus Masiulis
2.6	Neuromuscular adaptation to resistance training in elderly	497 doc. dr. Nerijus Masiulis
2.7	Power training methods and practical recommendations	497 doc. dr. Nerijus Masiulis
2.8	Testing of strength and power	497 doc. dr. Nerijus Masiulis
2.9	Aspects of strength and power training in athletes of different sports	497 doc. dr. Nerijus Masiulis
2.10	Strength and power training research: recent scientific advances	497 doc. dr. Nerijus Masiulis
3.	Endurance (asoc. prof. dr. Pranas Mockus, prof. dr. Tomas Venckūnas)	104 doc. dr. Pranas Mockus
3.1	Endurance: motor ability. definitions, classification	104 doc. dr. Pranas Mockus
3.2	Physiology of endurance	496 doc. dr. Tomas Venckūnas
3.3	Training of aerobic endurance. Nutrition.	104 doc. dr. Pranas Mockus
3.4	Interval training	496 doc. dr. Tomas Venckūnas
3.5	Altitude and non-traditional training for endurance performance	104 doc. dr. Pranas Mockus
3.6	Concurrent training	496 doc. dr. Tomas Venckūnas

№.	Sections and themes	Responsible lecturer
3.7	Endurance testing	104 doc. dr. Pranas Mockus
3.8	Endurance training in different sports I	104 doc. dr. Pranas Mockus
3.9	Endurance training in different sports II	104 doc. dr. Pranas Mockus

Evaluation procedure of knowledge and abilities:

#### References

№.	Title	Edition in Lithuanian Sports University library		In Lithuanian Sports University bookstore	Number of ex. in the methodical cabinet of the depart.
		Pressmark	Number of exemplars		
1.	Kenney, W.L., Wilmore, J.H., Costil, D.L. (2020). Physiology of Sport and Exercise, 7th ed. Champaign, IL: Human Kinetics.	796.01:612 Ke-112	2	No	
2.	Mikalauskas, R. (sudarytojas), Girdauskas, G., Zachovajevas, P., Stasiulis, A., Stanislovaitis, A., Novikovas, V., Jakubauskas, A., Skurvydas, A., Kontvainis, V. (2007). Trenerio knyga. Fizinis rengimas. [Vadovėlis]. Kaunas: LKKA. 264 p.	796.015 Tr94	50	Yes	
3.	Skurvydas, A. (2008). Judesių mokslas: raumenys, valdymas, mokymas, reabilitavimas, sveikatinimas, treniravimas, metodologija. [Vadovėlis]. Kaunas: LKKA. 606 p	612.7 Sk93	99	Yes	
4.	Nelson, A. G., Kokkonen, J. J. Streching Anatomy. 2007			No	
5.	Bompa, T.O. , Buzzichelli, C.A. (2015). Periodization Training for Sports. 3rd ed. Human Kinetics.			No	
6.	Kairaitis, R. (2012). Jėgos treniruotė. Kultūrizmas. Sveikatingumas. [Studijų knyga]. Kaunas: LKKA, 230 p.	796.89 Ka-151	21	Yes	
7.	Skarbalius, A., Masiulis, N., Stanislovaitis, A., Stanislovaitienė, J., Poderys, J., Kamandulis, S., Rutkauskaitė, R. (2012). Sports Coaching (Basics). [Studijų knyga]. Kaunas: LKKA. 261 p.	796.015 Sp51	100	Yes	
8.	Balyi, I., Way, R., Higgs, C. (2013). Long-Term Athlete Development. Human Kinetics.			No	
9.	Pyke, F. (2015). Coaching Excellence. Human Kinetics.	796.015 Co-01	1	No	
<i>Comment: Review Article</i>					
10.	Issurin, V. (2010). New horizons for the methodology and physiology of training periodization. Sports Medicine, 40(3), 189–206. [PDF]			No	

#### Additional literature

№.	Title
1.	Čepulėnas, A. (2001). Slidininkų rengimo technologija: monografija / Algirdas Čepulėnas ; Lietuvos kūno kultūros akademija. Kaunas : LKKA, 654 p.
2.	Karoblis, P. (2003). Jaunojo sportininko treniruotė.
3.	Chu, D.A. (1996). Explosive Power and Strength. Complex Training for Maximum Results.

№.	Title
4.	Tanner, R.K., Gore, Ch., J. (2013). Physiological tests for elite athletes, 2nd ed. Human Kinetics.
5.	Bompa, T.O. , Buzzichelli, C.A. (2022). Periodization of strength training for Sports. Human Kinetics.
6.	Gabbet. T. (2014). Effects of Physical, Technical, and Tactical Factors on Final Ladder Position in Semiprofessional Rugby League. International Journal of Sports Physiology and Performance, 9, 680-688.
7.	Votteler, A., Honer, O. (2014). The relative age effect in the German Football TID Programme: Biases in motor performance diagnostics and effects on single motor abilities and skills in groups of selected players. European Journal of Sport Science, 14:5, 433–442.
8.	Ross, M., Abbiss, C., Laursen, P. (2013). Precooling Methods and Their Effects on Athletic Performance A Systematic Review and Practical Applications. Sports Medicine, 43:207–225.
9.	Naclerio, F. Moody, J. Chapman, M. (2013). Applied periodization: a methodological Approach. Journal of Human Sport & Exercise. Volume 8, Issue 2, 350–366.

Coordinating lecturer

Position	Degree, surname, name	Schedule №.
Professor	Prof. Dr. Sigita Kamandulis	111

Subdivision

Entitlement	Code
Department of Coaching Science	2005

**Study module teaching form №. 1**

Semester	Mode of studies	Structure				Total hours	Credits	
		Theory	Seminars	Lab Works	Ind. work			
A	S	D	36	18	6	200	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.
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Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
1.1	1	0	0	2.6	1	0	1
1.2	2	1	0	2.7	1	0	1
1.3	1	1	0	2.8	1	0	1
1.4	2	1	0	2.9	1	0	1
1.5	1	1	0	2.10	1	1	0
1.6	1	1	0	3.1	1	0	0
1.7	2	1	0	3.2	1	1	0
1.8	2	1	0	3.3	1	1	0
1.9	2	1	0	3.4	1	0	0
1.10	1	0	0	3.5	1	1	0
2.1	2	0	0	3.6	1	1	0
2.2	1	0	0	3.7	2	0	2
2.3	1	1	0	3.8	1	1	0
2.4	1	1	0	3.9	1	1	0
2.5	1	1	0				
				Total:	36	18	6

Schedule of individual work tasks and their influence on final grade

	№. of syllabus	Total hours	Influence on grade, %	Week of presentment of task (*) and reporting (o)																						
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20						
Mid-term examination	1.1-1.10	77	38	*															0							
Mid-term examination	2.1-2.10	63	32																							0
Mid-term examination	3.1-3.9	60	30																							0
Total:	-	200	100																							

Study module teaching form №. 2

Semester		Mode of studies	Structure				Total hours	Credits
			Theory	Seminars	Lab Works	Ind. work		
A	S	N	36	18	6	200	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.
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Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
1.1	1	0	0	2.6	1	0	1
1.2	2	1	0	2.7	1	0	1
1.3	1	1	0	2.8	1	0	1
1.4	2	1	0	2.9	1	0	1
1.5	1	1	0	2.10	1	1	0
1.6	1	1	0	3.1	1	0	0
1.7	2	1	0	3.2	1	1	0
1.8	2	1	0	3.3	1	1	0
1.9	2	1	0	3.4	1	0	0
1.10	1	0	0	3.5	1	1	0
2.1	2	0	0	3.6	1	1	0
2.2	1	0	0	3.7	2	0	2
2.3	1	1	0	3.8	1	1	0
2.4	1	1	0	3.9	1	1	0
2.5	1	1	0				
				Total:	36	18	6

Schedule of individual work tasks and their influence on final grade

	№. of syllabus	Total hours	Influence on grade, %	Week of presentment of task (*) and reporting (o)																						
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20						
Mid-term examination	1.1-1.10	77	38	*																0						
Mid-term examination	2.1-2.10	63	32																							0
Mid-term examination	3.1-3.9	60	30																							0
Total:	-	200	100																							

Study module teaching form №. 3

Semester		Mode of studies		Structure				Total hours	Credits
				Theory	Seminars	Lab Works	Ind. work		
A	S	N		0	0	0	260	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.
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Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
				Total:	0	0	0

Schedule of individual work tasks and their influence on final grade

	№. of syllabus	Total hours	Influence on grade, %	Week of presentment of task (*) and reporting (o)																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20
Total:	-	0	0																	