

Cooperation Framework between Faculty of Sport and Tennis Association – Slovenian perspective

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Univerza v Ljubljani
Fakulteta *za šport*

Slovenian sport facts 1

- Population: 2.058.000 (2012)
- All public expenditure on sport: 154.910.945€
- The average annual household consumption for sport: 308,4€
- Number of active sport clubs: 6.286
- The annual total income of sports clubs and associations: 214.828.059€
- Indoor sport facilities (m²/ per inhabitant): 0,33
- Outdoor sport facilities (m²/ per inhabitant): 3,18.

Slovenian sport facts 2

- No. hours of physical education per week:
 - 2-3 hours – primary school
 - 1.3 hours – secondary school
 - 0 hours – university
- In first three classes pupils can choose 1-2 hours of extra sport activities
- In 2008 64% of the adult population is involved in sport.

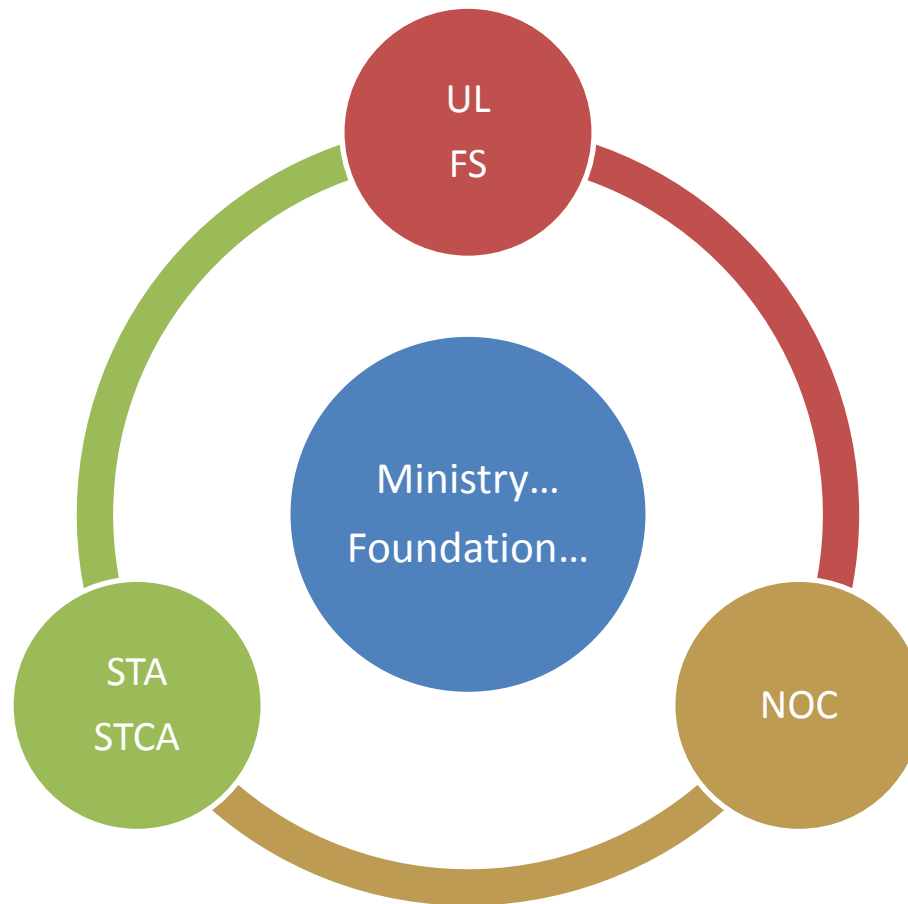
Slovenian sport facts 3

- No. of organized world/European championships: 5
- Total no. of registred athletes in national competation systems: 122.052
- Sport associations with categorized athletes: 115
- NOC categorized athletes: 5.110
- Top athletes (world/international): 1.051
- Youth athletes in national sport schools: 12.135
- Sport associations with CES: 63, 333 programmes/y
- Researchers in sport: 101.

Slovenian tennis facts

- No. of outdoor court: 600
- No of indoor courts: 150
- No. of tennis clubs in STA: 100
- Total no. of players: 10.000
- No. of registred players - STA: 2.000
- Total no. of tennis coaches with diploma: 800
- No. of tennis coaches in STCA: 200
- Top players: 2 in top 100 ATP, 1 in top 100 WTA.

Organisation



Ministry for education, science and sport & Foundation for financing sport organisations in Slovenia)

- Mission: strategic, programmes and projects operation, criteria design for funding and control of spending, sport law (1998), sport inspectors, E-sport data base, national strategy for sport (2014-2023)
- Ministry... (2014): total budget 14,9 mio EUR
- Foundation... (2014): total budget 7,7 mio EUR
- STA: total annual budget 0,6 mio EUR, 0,23 mio EUR for DC, FC & junior programmes

Olympic Committee of Slovenia (OCS)

- Founded in 1991 and in 1992 accepted as a full member of IOC
- 30 employes
- Responsible for:
 - a. Top sport
 - b. Sport for all
 - c. Local sport organisation
 - d. Projects: European Social Fund – Tennis Coach Education

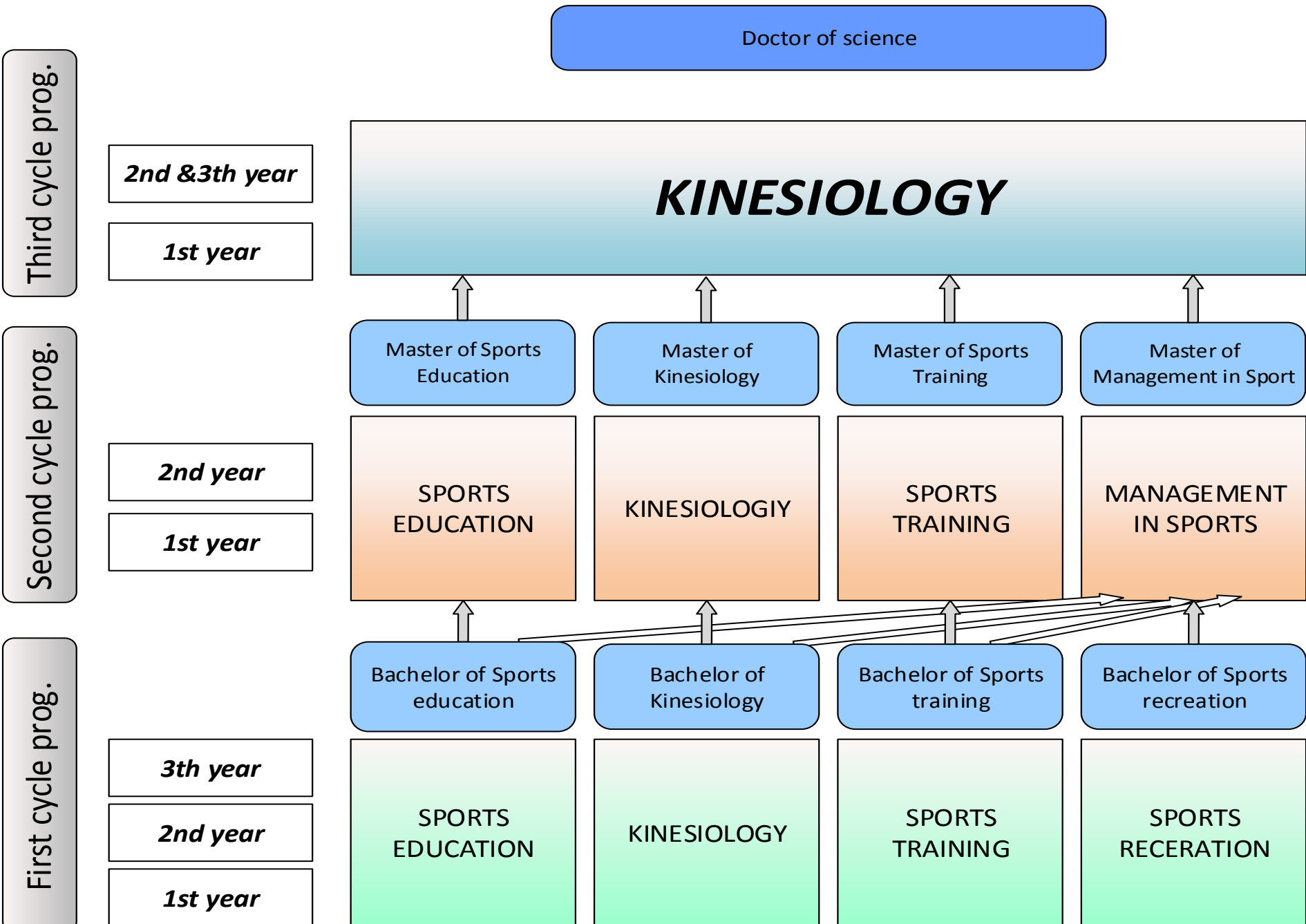
University of Ljubljana

- Largest, oldest and most prestigious, composed of 23 faculties, 3 academies and 3 associated members
- More than 50.000 students
- Employing more than 6.200 staff
- Ranked between 401st-500th place at AWRU

Faculty of Sport

- Established in 1953
- Integrally develops:
 - a. Educational,
 - b. Research & Scientific (**Institute of Kinesiology**),
 - c. Professional & Consulting activity (**Institute for Sport**)
- Until 1998 responsible for CE (all sports)
- „New“ Bologna programmes designed in 2009
- Tennis integrated (1992) in Bologna programmes.

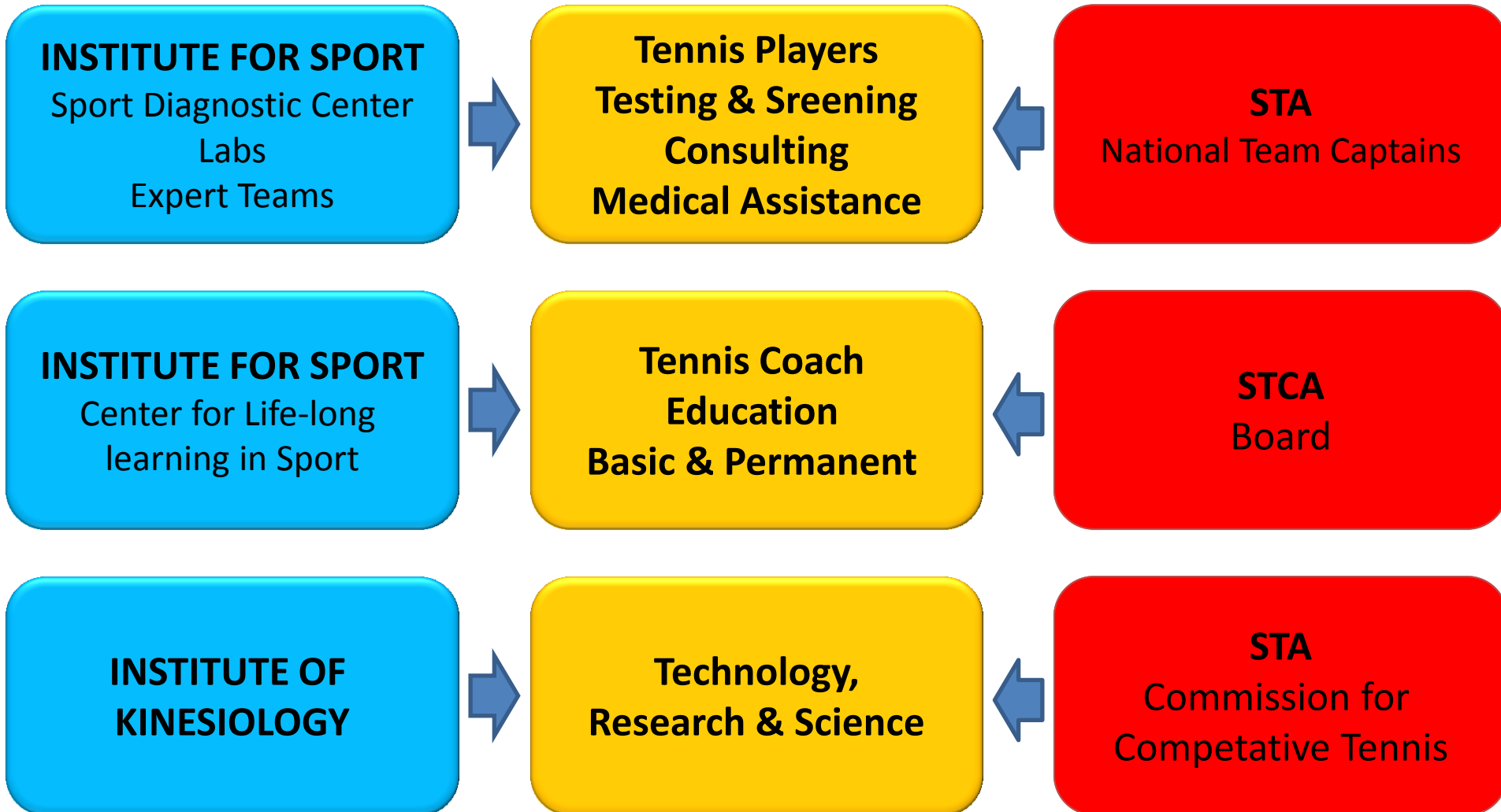
Bologna study programmes at the Faculty of sport



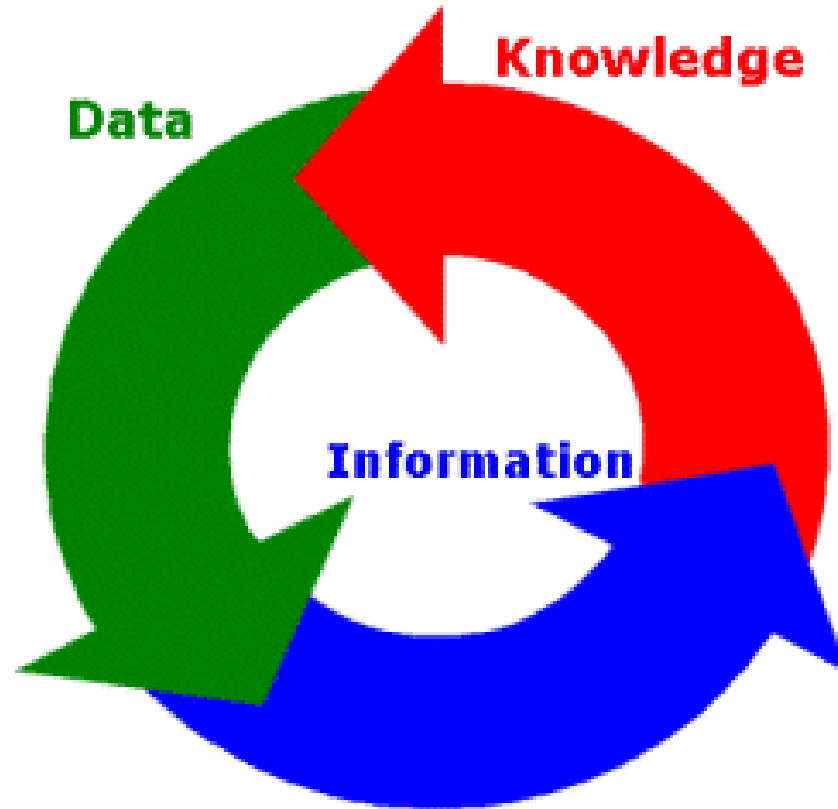
Slovene Tennis & Coaches Association

- STA Administration & Organisation, DC & FC Teams, Junior PDP...Testing & Screening
- Tennis Coach Education (Basic & Permanent)
- 1st Course for Tennis Coaches organised in 1978
- 1st Seminar for license organised in 1992
- Slovene Tennis Coaches Association (STCA) established in 1996
- In 2000 and 2001 organised Tennis Europe Coaches Conference
- This year we'll organise 19th National Tennis Coaches Conference, 15 license seminars (many international speakers).

Relations and activities



Tennis Players Testing & Screening



Long-term planing



Motor development pyramid



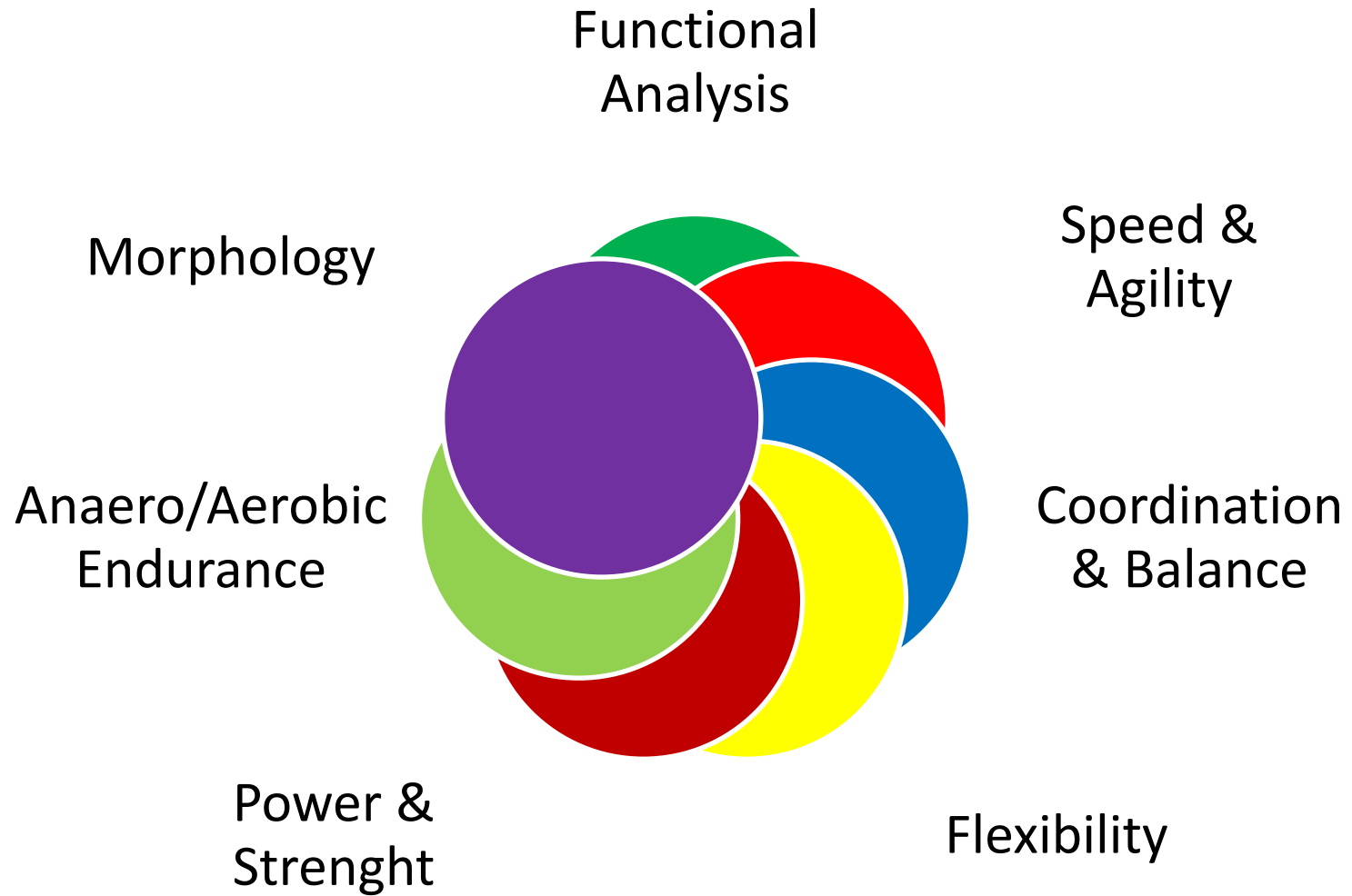
A pyramid diagram with three stacked rectangular blocks. The top block is red and contains the text 'TENNIS SKILLS'. The middle block is green and contains the text 'FITNESS & CONDITONING'. The bottom block is blue and contains the text 'FUNCTIONAL MOVEMENT BASE'. The blocks are centered and decrease in width from bottom to top.

TENNIS SKILLS

FITNESS & CONDITONING

FUNCTIONAL MOVEMENT BASE

Testing & Screening



Functional Movement System



photo: S. Štuhec

20 m sprint



photo: S. Štuhec

Balance



Tensiometric plate



Dynamometry



Iso-kinetic shoulder test



In-body

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range		
I C W (ℓ)	21,5	35,1	45,0	47,6	52,7	22,3 ~ 27,3		
E C W (ℓ)	13,6					13,7 ~ 16,7		
Protein (kg)	9,3	non-osseous		47,6		52,7	9,6 ~ 11,8	
Mineral (kg)	3,17	Osseous: 2,65					3,33 ~ 4,07	
Body Fat Mass (kg)	5,1			47,6		52,7	7,7 ~ 15,3	

□ Mineral is estimated.

Muscle-Fat Analysis

	Under	Normal	Over	UNIT%	Normal Range
Weight (kg)	55 70 85 100 115 130 145 160 175 190 205	52,7			54,4 ~ 73,6
S M M (kg)	70 80 90 100 110 120 130 140 150 160 170	26,0			27,3 ~ 33,3
Body Fat Mass (kg)	40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520	5,1			7,7 ~ 15,3

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²)	12,9 15,9 18,9 21,9 24,9 27,9 30,9 33,9 36,9 39,9 42,9	18,0		18,9 ~ 24,9
P B F (%)	0 5 10 15 20 25 30 35 40 45 50	9,6		10,0 ~ 20,0
W H R	0,70 0,75 0,80 0,85 0,90 0,95 1,00 1,05 1,10 1,15 1,20	0,77		0,80 ~ 0,90

Lean Balance

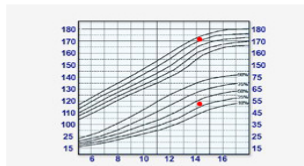
	Under	Normal	Over	UNIT%	Segmental Edema	Edema
Right Arm (kg)	55 70 85 100 115 130 145 160	2,45			0,330	0,376
Left Arm (kg)	55 70 85 100 115 130 145 160	2,33			0,333	0,380
Trunk (kg)	70 80 90 100 110 120 130 140	20,5			0,341	0,388
Right Leg (kg)	70 80 90 100 110 120 130 140	7,75			0,343	0,390
Left Leg (kg)	70 80 90 100 110 120 130 140	7,76			0,344	0,392

segmental fat is estimated

Weight Control

Target Weight	64,0kg	□ Obesity Degree	82,3% (90~110)
Weight Control	11,3kg	□ Body Cell Mass	30,8kg (31,9 ~ 39,0)
Fat Control	4,5kg	□ Bone Mineral Content	2,65kg (2,74 ~ 3,34)
Muscle Control	6,8kg	□ Basal Metabolic Rate	1399kcal (1241~1434)
Fitness Score	69Points	□ AC	25,2cm
		□ AMC	22,4cm

Growth Chart



Impedance

Z	RA	LA	TR	RL	LL
1kHz	376,8	391,1	26,0	275,0	270,1
5kHz	369,7	382,0	24,5	271,6	269,7
50kHz	331,0	350,1	21,3	248,1	246,5
250kHz	300,0	317,6	17,6	226,3	224,9
500kHz	287,7	309,0	16,8	220,1	218,8
1MHz	276,4	298,5	14,0	215,2	214,2

Nutritional Evaluation

Protein	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Deficient	
Mineral	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Deficient	
Fat	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Deficient	<input type="checkbox"/> Excessive

Weight Management

Weight	□ Normal	■ Under	□ Over
S M M	□ Normal	■ Under	
Fat	□ Normal	■ Under	□ Over

Obesity Diagnosis

B M I	□ Normal	■ Under	□ Over
P B F	■ Normal	□ Over	□ Extremely Over
W H R	■ Normal	□ Over	□ Extremely Over

Body Balance

Upper	■ Balanced	□ Slightly Unbalanced	□ Extremely Unbalanced
Lower	■ Balanced	□ Slightly Unbalanced	□ Extremely Unbalanced
Upper-Lower	□ Balanced	■ Slightly Unbalanced	□ Extremely Unbalanced

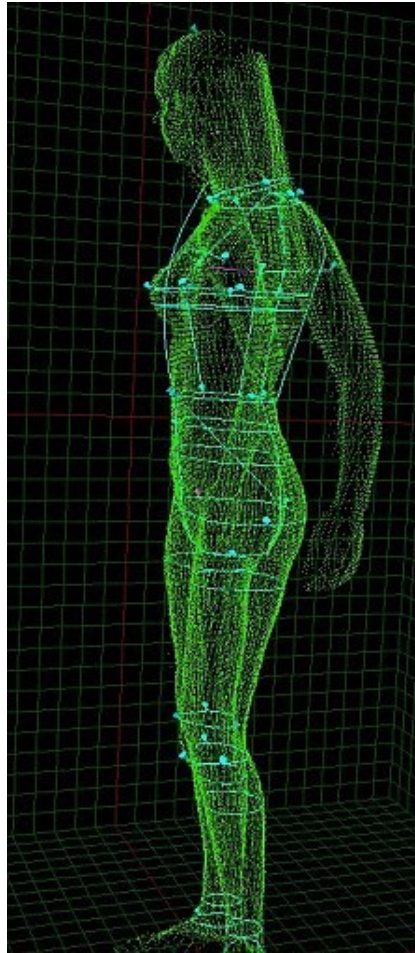
Body Strength

Upper	■ Normal	□ Developed	□ Weak
Lower	■ Normal	□ Developed	□ Weak
Muscle	■ Normal	□ Muscular	□ Weak

Health Diagnosis

Body Water	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Under	
Edema	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Slight Edema	<input type="checkbox"/> Edema
Life Pattern	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Alert	<input type="checkbox"/> Risky

3D body scanner



Players test profile

BOH GREGA

MAX LJ; Rojen: 29.10.1997; Meritev: 12.10.2013 (Repr. SLO; Di/De)
Skupina: moški, datum rojstva do 31.12.1998

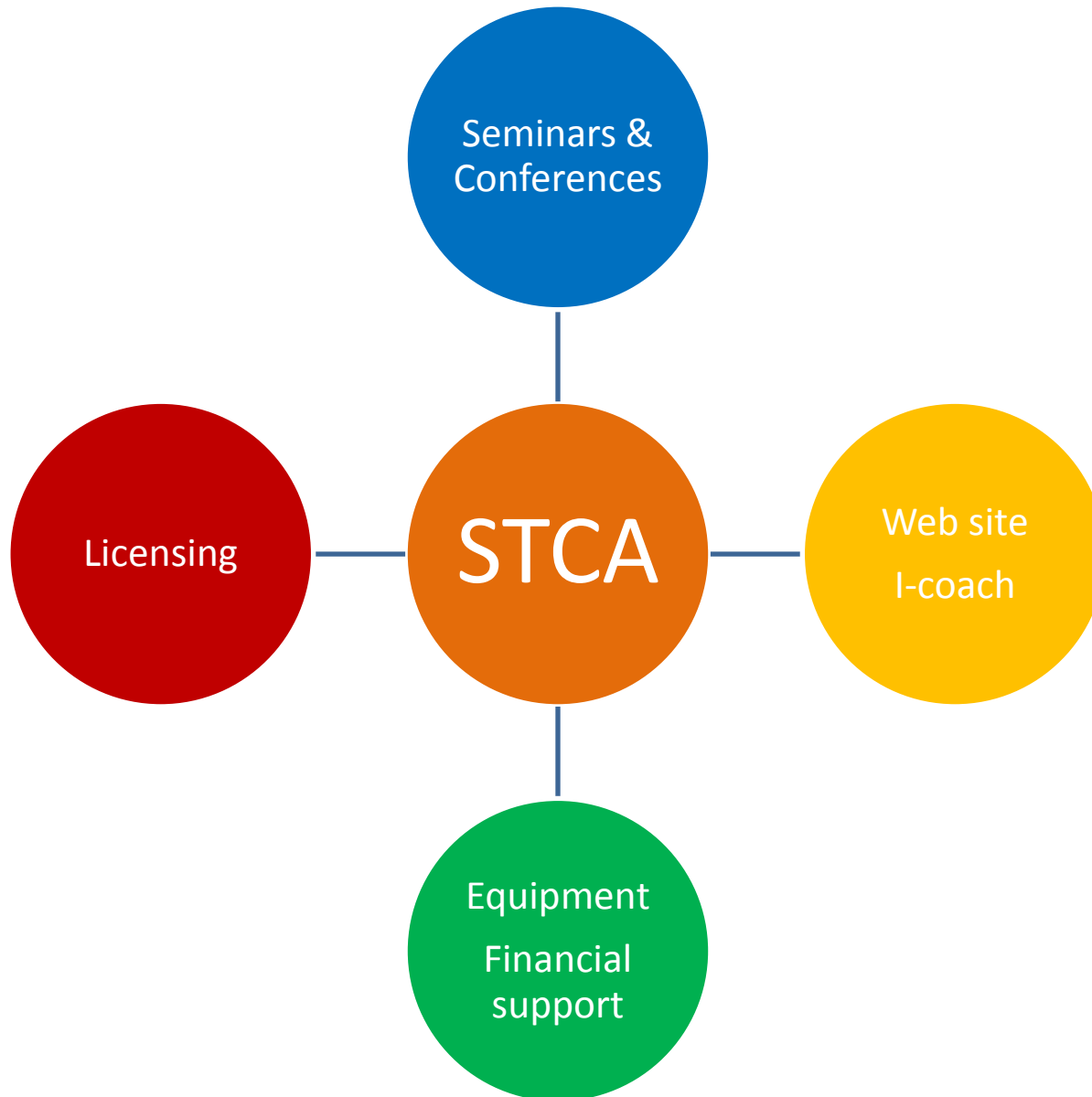
Šifra	Ime	Enota	Rez.	z	Profil	Prejšnji rez.
MTTL	T test 4x8 - v levo	s	6,58	-0,09		6,9 (20.10.2012)
MTTD	T test 4x8 - v desno	s	6,45	0,40		6,71 (20.10.2012)
MMM2	Met medicinske (2 kg)	cm	1410	0,18		1330 (20.10.2012)
MT9X6	Tek 9x6 metrov	sek.	15,8	0,02		19 (20.10.2012)
MTAPNO	Taping z nogo	pon.	39	2,54		33 (20.10.2012)
MTAPRO	Taping z roko	pon.	54	0,53		49 (20.10.2012)
MTPK	Predklon na klopici	cm	42	-0,72		37 (20.10.2012)
MZVIN	Zvlnik s palico	cm	42	3,12		46 (20.10.2012)
MIZPK	Izpadni korak	cm	161	-0,16		182 (20.10.2012)
MPAH	Pahjača	sek.	13,6	0,54		14 (20.10.2012)
MPOL	Poligon nazaj	sek.	8,3	0,82		9,9 (20.10.2012)
MOZL60	Odbijanje žoge z loparjem	pon.	62	0,85		62 (20.10.2012)
MDT60	Dviganje trupa 60 sekund	pon.	61	0,60		66 (20.10.2012)
MSKOK4	Štrikok z mesta	cm	1050	1,97		720 (17.10.2009)
FBIP	Bip test (št. stop./stož)	st/st	12,9	0,59		12,02 (20.10.2012)
ATV	Telesna višina	cm	180,5	0,21		178,5 (20.10.2012)
ADZGO	Dotžina roke	cm	79,6	-0,32		78 (20.10.2012)
ADSP0	Dotžina noge	cm	103,9	-0,05		104 (20.10.2012)
ASR	Širina ramen	cm	39,9	0,07		39,1 (20.10.2012)
ASM	Širina medenice	cm	28	0,73		27,2 (20.10.2012)
APKOM	Premier kolovca (levi)	cm	7,4	0,36		7,4 (20.10.2012)
APKOL	Premier kolena	cm	10,2	0,23		9,5 (20.10.2012)
APG	Premier gležnja	cm	8	0,53		7,5 (20.10.2012)
APZD	Premier zapestja-desni	cm	5,6	-1,16		5,7 (20.10.2012)
APZ	Premier zapestja	cm	5,7	-0,29		5,7 (20.10.2012)
AOND	Obseg sprošč. nadlahti-d.	cm	29	0,57		28,2 (20.10.2012)
AON	Obseg sproščene nadlahti	cm	28	0,49		27,9 (20.10.2012)
AONMAXD	Obseg pokrč. nadlahti-d.	cm	31,8	0,51		31,1 (20.10.2012)
AONMAX	Obseg pokrčene nadlahti	cm	30,3	0,29		31,4 (20.10.2012)
AOPD	Obseg podlahti-desna	cm	28,3	0,90		27,9 (20.10.2012)
AOP	Obseg podlahti	cm	26	0,27		25,7 (20.10.2012)
AOPR	Obseg prsi (normalno)	cm	91,7	0,33		93,6 (20.10.2012)
AOPMAX	Obseg prsi (maksimalno)	cm	94,1	0,19		95,4 (20.10.2012)
AOS	Obseg stegna	cm	55,5	0,23		55,9 (20.10.2012)
AOSLS	Srednji obseg stegna	cm	54,5	0,91		52,1 (20.10.2012)
AOG	Obseg goleni	cm	37,1	0,25		37,4 (20.10.2012)
AKGH	Kožna guba hrbta	mm	10,2	0,02		9 (20.10.2012)
AKGN	Kožna guba nadlahti	mm	11,8	-0,77		11 (20.10.2012)
AKGB	Kožna guba bicepsa	mm	6,4	-1,06		4,6 (20.10.2012)
AKGP	Kožna guba podlahti	mm	9,2	-1,46		7 (20.10.2012)
AKGPR	Kožna guba prsi	mm	11,6	-0,78		8,8 (20.10.2012)
AKGT	Kožna guba trebuha	mm	14,2	-0,09		12,6 (20.10.2012)
AKGS	Kožna guba stegna	mm	16	-0,49		15,2 (20.10.2012)
AKGSI	Kožna guba suprailakalna	mm	15,4	-0,75		12,2 (20.10.2012)
AKGG	Kožna guba odra	mm	15,2	-1,82		12,2 (20.10.2012)

AOPR3D	3D obseg prsi	cm	101,9	0,54		
AOPAS3D	3D obseg pasu	cm	79,2	-0,25		
AOBOK3D	3D obseg bokov	cm	97,1	0,63		
AOPL3D	3D obseg leve podlahti	cm	26,7	0,51		
AOPD3D	3D obseg desne podlahti	cm	28,3	0,77		
AONL3D	3D obseg leve nadlahti	cm	30,3	0,46		
AOND3D	3D obseg desne nadlahti	cm	32,2	0,76		
AOSL3D	3D obseg levega stegna	cm	60,9	0,30		
AOSD3D	3D obseg desnega stegna	cm	57,8	-0,16		
AOKOLL3D	3D obseg levega kolena	cm	37,8	0,41		
AOKOLD3D	3D obseg desnega kolena	cm	37,9	0,14		
AOGL3D	3D obseg leve goleni	cm	36,1	0,24		
AOGD3D	3D obseg desne goleni	cm	36,1	0,16		
FMSGP	FMS Globokl počep		2	0,49		2 (20.10.2012)
FMSKO	FMS Korak čez oviro		3	1,85		2 (20.10.2012)
FMSIK	FMS Izpadni korak		3	2,54		2 (20.10.2012)
FMSMR	FMS Mobilnost ramena		3	1,13		3 (20.10.2012)
FMSADN	FMS Aktivni dvig noge		2	-0,74		1 (20.10.2012)
FMSST	FMS Skleca s stabil.trupa		3	0,62		
FMSR	FMS Stabiliz. rotatorjev		2	0,21		2 (20.10.2012)
FMSVSOTA	FMS Vsota vseh 7 nalog		18	1,51		
IBATT	Telesna teža (InBody)	kg	72,5	0,00		
IBZNCALT	IB Znotrajcel. tekočina	l	30,1	0,34		
IBZUCALT	IB Zunajcelična tekočina	l	17,8	0,27		
IBBELJAK	IB Beljakovine	kg	10,9	0,28		
IBMINER	IB Minerali	kg	4,38	0,16		
IBMINOK	IB Minerali okostja	kg	3,66	0,31		
IBMASMT	IB Maščobna masa v telesu	kg	5,7	-0,06		
IBMISMT	IB Masa mišic v telesu	kg	37,21	0,34		
IBITM	IB Indeks telesne mase	kg/m2	21,79	0,18		
IBOMASMT	IB % maščob v telesu	%	7,98	-0,11		
IBPTMDR	IB Pusta tel. masa d.roka	kg	3,79	0,38		
IBMASMDR	IB Maščobna masa d.roka	kg	0,1	-0,67		
IBPTMLR	IB Pusta tel. masa l.roka	kg	3,64	0,46		
IBMASMLR	IB Maščobna masa l.roka	kg	0,1	-0,76		
IBPTMT	IB Pusta tel. masa trupa	kg	28,5	0,43		
IBMASMTR	IB Maščobna masa trupa	kg	2,4	0,00		
IBPTMDN	IB Pusta tel. masa d.noga	kg	10,3	0,17		
IBMASMDN	IB Maščobna masa d.noga	kg	1	-0,17		
IBPTMLN	IB Pusta tel. masa l.noga	kg	10,2	0,14		
IBMASMLN	IB Maščobna masa l.noga	kg	1	-0,13		
IBPOVMAS	IB Površ. visoer. maščobe	cm2	27,31	0,14		
IBODEB	IB Stopnja debelosti	%	97,93	0,12		
IBMTC	IB Masa celic v telesu	kg	43,06	0,34		
IBBMET	IB Bazalni metabolizem	kcal	1781,25	0,32		
IBPOVT	IB Površina telesa	m2	1,918	0,08		
SJ.VODR	SJ-Višina odniva	cm	30,17	-0,24		25,16 (20.10.2012)
SJ.CODR	SJ-Čas odniva	ms	331	0,90		419 (20.10.2012)
SJSTMOR	SJ-Štartna moč	m/s3	0,5	-1,07		0,4 (20.10.2012)
SJSPZ	SJ-Indeks 1	%	194,4	0,58		242,6 (20.10.2012)

Tennis Coach Education

FACULTY OF SPORT	SLOVENE TENNIS ASSOCIATION	SLOVENE TENNIS COACHES ASSOCIATION
BOLOGNA 2ND CYCLE STUDY PROGRAMME – SPORT TRAINING Title: master of Sport Training Volume: 1800 hours – 120 CP Entry conditions: Bachelor of Sport Training		
BOLOGNA 1ST CYCLE STUDY PROGRAMME – SPORT TRAINING Title: Bachelor of Sport Training Main condition: completed subject Sport A: Tennis Total volume: 2700 hours – 180 CP / Tennis program – 480 hours - 32 CP Entry conditions: Playing and coaching experiences	TENNIS COACH A Title: Tennis Coach A Volume: 75 hours – 5 CP Entry conditions: Tennis Coach B Topics: Long&short-term planning, Creating club PDP, Fitness & Conditioning & Integrated Training, Talent ID, Marketing & Promotion activities etc.	TENNIS COACHES SEMINARS AND CONFERENCES
BOLOGNA 1ST CYCLE STUDY PROGRAMME – SPORT EDUCATION Subject: Racket sports Title: no Volume: 60 hours – 4 CP/ Tennis 15 hours – 1 CP Entry conditions: no. PERMANENT EDUCATION FOR SPORTS SCHOOL TEACHERS Subject: Tennis in School Title: no Volume: 24 hours Entry conditions: no.	TENNIS COACH B Title: Tennis Coach B Volume: 60 hours – 4 CP Entry conditions: Tennis Coach C Topics: Advanced Tactics & Biomechanics, Mental & Integrated Training, Training and match analysis etc.	SPECIFIC THEME COACHES SEMINARS (Tennis Coach A, B, C, D)
	TENNIS COACH C Title: Tennis Coach C Volume: 105 hours – 7 CP Entry conditions: Tennis Coach D Topics: Tactics & Biomechanics, Tactical & technical development, Training methodology, Players development, Planning, Communication etc.	OTHER SPORT SEMINARS, CONFERENCES AND CONGRESSES
	TENNIS COACH D Title: Tennis Coach D Volume: 60 hours – 4 CP Entry conditions: optimal playing standard. Topics: Basics of Tactics & Technique, Teaching methodology & organisation, Motor development, Communication etc.	

STCA activities



Tennis Coach Education & OCS

- Trought OSC since 2006 coach education in all sports is financialy supported by European Social Fund (ESF) - Education and Training of Coaches in Sport
- In perspective 2011-2014 with 2.9 mio EUR
- 9 Tennis Coach A, B, C Courses was organised (more then 200 candidates), not Coach D
- Students of FS could participate ESF courses.

Technology, Research & Science

- Laboratory for Biodynamics, Biomechanics, Diagnostics of Physical and Motor Development, Kinesiology, Motion Control, Physical Behavior, Physiology of Sport, Psychodiagnostics, Medical Diagnosis and Nutrition
- Research Projects and Groups
- Habilitation process.

Technology, Research & Science Results (tennis)

- No. of CE manuals: 5 books, 1 DVD, 1 CD
- No. of scientific articles published: 29
- No of undergraduate theses : 73
- No. of master degree theses: 3
- No. of PhD theses: 1
- Racket sports monography: Scientific approach in table tennis and tennis in Slovenia

S.W.O.T

- **Strengths:** tradition, good relations (faculty, NOC, STA)
- **Weaknesses:** human (one man band)
 - and financial resources, ESF (only candidates have benefit)
- **Opportunities:** co-operation with neighbour NTA (coaches conferences...)
- **Threats:** STA's orientation (DC, FC, pro events), competition on tennis coaches market.

Future

- **FS**: reduction of Bologna programmes (from 4 – 1 or 2 on a first cycle level)
- **SCTA**: to start with ITF Project of Recognition of Coach Education Systems of National Associations
- **STA**: ?!

Questions?



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Visit Slovenia

