

UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet: Turno kolesarstvo

Course title: Mountain bike touring

Študijski programi in stopnja

Študijska smer

Letnik

Semestri

Športno treniranje, Klneziologija, Športna vzgoja, prva stopnja, univerzitetni

Ni členitve (študijski program)

3

Letni

Univerzitetna koda predmeta/University course code:

683

| Predavanja | Seminar | Vaje | Klinične vaje | Druge oblike študija | Samostojno delo | ECTS |
|------------|---------|------|---------------|----------------------|-----------------|------|
| 15 | | 45 | 0 | 0 | 0 | 4 |

Nosilec predmeta/Lecturer:

izr. prof. dr. Tadej Debevec, doc. dr. Samo Rauter

Vrsta predmeta/Course type:

Izbirni

Jeziki/Languages:

Predavanja/Lectures:

Slovenščina

Vaje/Tutorial:

Slovenščina

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites:

Za pristop k predmetu ni posebnih zahtev

No special requirements

Vsebina:

Content (Syllabus outline):

Gorsko kolesarstvo se je razvilo na podlagi tehničnega napredka koles, ki omogočajo vožnjo v strmeh svetlu in po zelo grobi in razgibani podlagi v gorah. Med številnimi zvrstmi gorskega kolesarstva je vse bolj priljubljeno turno kolesarstvo – vožnja po poteh v naravnem okolju gorskega sveta. Poglavitne teoretične in praktične vsebine so navedene spodaj:

Teoretični del:

- Organiziranost kolesarjev in informacijski viri
- Zakonske osnove, moralna in pravna odgovornost

Recent popularization of mountain biking is a consequence of technological bike development that enabled cycling in steep & varied terrain as well as cycling on hard gravel roads and paths. Between the different types of mountain biking the mountain bike touring, where the cycling takes place in natural mountainous environment, is among the most popular ones. The main theoretical and practical contents of the course are outlined below:

Theoretical part:

- Cycling organizational structure & information sources

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| <ul style="list-style-type: none"> • Teorija in metodika kolesarskega treninga • Prehrana pri kolesarjenju • Psihologija vodenja • Ohranjanje in varstvo narave • Planinske in kolesarske poti • Prva pomoč – posebne vsebine vezane na turno kolesarstvo • Orientacija in načrtovanje turno kolesarskega izleta • Vodenje in varnost skupine • Oprema turnega kolesarja • Tehnika vožnje kolesa • Razvoj turizma in športne rekreacije v gorskih območjih po svetu in v Sloveniji. • Socialni in ekonomski vidiki izvajanja različnih športno rekreativnih dejavnosti v gorskih območjih. <p>Praktični del:</p> <ul style="list-style-type: none"> • Izdelava seminarske naloge na izbrano tematiko s področja, vodenja turno kolesarskega izleta, problematike turno kolesarskih poti, ki bo vsebovala ustrezen metodološki pristop in bo vsebinsko ustrezna. • Predstavitve seminarske naloge na terenskih vajah. <p>Terenske vaje:</p> <ol style="list-style-type: none"> a) tehnika vožnje kolesa b) osnovno vzdrževanje kolesa in popravila na terenu c) nastavitve in optimizacija položaja kolesarja d) orientacija e) priprava (opis ture, vris v zemljevid, skica poti, profil poti) f) vodenje turno kolesarskega izleta. | <ul style="list-style-type: none"> • Legislation and liability issues in cycling • Mountain bike training & conditioning • Psychology of leadership • Environmental issues & sustainability • Mountaineering and cycling paths & tracks • First aid – special topics related to cycling • Orienteering and planning of the mountain bike touring tours. • Guiding & safety in mountain biking • Mountain bike touring equipment • Special mountain biking techniques • Touristic and recreational development in Slovenia and abroad • Social and economic aspects of various recreational activities in mountainous areas <p>Practical part:</p> <ul style="list-style-type: none"> • Seminar work on the selected topic from bike touring (guiding, cycling paths, etc..) that address the topic from a methodological and organisational perspective. • Presentation of the seminar work during the course of the field work... <p>Field work:</p> <ol style="list-style-type: none"> a) Special cycling techniques b) Bike maintenance and fast repairs c) Bike fitting & optimal positioning d) Orienteering e) Bike tour preparation (short summary, map, scheme, profile) f) Leading a suitable mountain bike tour |
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Temeljna literatura in viri/Readings:

- Planinska šola: učbenik, različni avtorji, Ljubljana: Planinska zveza Slovenije 2005
- Vodniški učbenik: učbenik, različni avtorji, Ljubljana: Planinska zveza Slovenije 2006
- Gorazd Stražičar: Sem kolesar, gorski kolesar, MTB priročnik, Pisanica, 2007
- Narava v gorskem svetu: učbenik, različni avtorji, Ljubljana: Planinska zveza Slovenije 2006
- Alpin-lehrplan band 7, Hermann Böhler et al.: Mountainbiken, Deutscher Alpenverein, Verband Deutscher Berg und Skiführer, Alpenverein Südtirol

Cilji in kompetence:

Temeljni cilj programa je usposobiti strokovne kadre za vodenje srednje zahtevnih turno kolesarskih izletov. Študentje bodo usposobljeni za vodenje po javnih cestah, gozdnih cestah, grajenih gozdnih vlakah in poljskih poteh, kjer zahtevnost spusta ne preseže 3. do 4. stopnje (S3 – S4) po Paternujevi sedem-stopenjski lestvici (srednje zahtevni spusti po slabih, strmih, do zelo strmih makadamskih cestah, gozdnih cestah, grajenih gozdnih vlakah in poljskih poteh z zelo redkimi ovirami). Pridobili bodo tudi ustrezno znanje orientacije za gibanje po omenjenem terenu. Prav tako bodo študentje usposobljeni za strokovno in raziskovalno delo na področju turnega kolesarstva ter bodo sposobni kritične presoje, hkrati pa aktivnega vključevanja pri izvajanju in organizaciji različnih športno rekreativnih dejavnosti v gorskih območjih.

Objectives and competences:

The key objective of this course is to enable the students to obtain the skills and know how to guide easy and moderate mountain bike touring trips. The students will be able to guide on public roads, forest roads and field tracks where the difficulty of the descent does not exceed level 3-4 (S3-S4) on the Paternau's seven level scale (moderately difficult descents on steep gravel roads and field tracks with limited number of hurdles). The students will also obtain sufficient orienteering skills for mountain biking in the above-mentioned terrain. The course will enable students to perform research and applied work in the field of mountain biking and will be able to assist, execute and guide mountain biking touring activities as well as understand the importance and limitations of recreational activities in the mountainous activities.

Predvideni študijski rezultati:

- Študenti bodo sposobni podajati temeljna znanja o turnem kolesarstvu
- Sposobni bodo pripraviti in voditi izlete z gorskim kolesom v gorskem okolju zunaj urejenih cest.
- Sposobni bodo oceniti sposobnosti udeležencev turno kolesarskega izleta in ustrezno prilagoditi zahtevnost izleta.

Intended learning outcomes:

- The students will be able to teach the basic topics of mountain bike touring.
- They will be able to guide the mountain biking tours outside of the urban environment.
- They will be able to assess the ability of the participants of the mountain guiding tours and adjust the tour accordingly.

Metode poučevanja in učenja:

Predavanja, seminarji, seminarska naloga, terenske vaje

Learning and teaching methods:

Lectures, seminars, seminar work, field training

Reference nosilca/Lecturer's references:

Doc. dr. Tadej Debevec je na Fakulteti za šport diplomiral leta 2006. Doktorat je leta 2011 pridobil na Mednarodni podiplomski šoli Jožefa Stefana za raziskovalno delo na področju učinkov višinske/hipoksične in hiperoksične vadbe na fiziološke adaptacije in športno sposobnost. V letih 2013/2014 je bil podoktorski raziskovalec na Univerzi v Cape Town, Faculty of Health Sciences Department of Human Biology, UCT/MRC Research Unit for Exercise Science and Sports Medicine. Njegovo raziskovalno delo obsega preučevanje adaptacijskih fizioloških mehanizmov na različne okoljske dejavnike tako pri zdravih posameznikih kot tudi v kliničnih populacijah. Leta 2015 je bil izvoljen v naziv docent za področje kinezioloških znanosti na Univerzi v Ljubljani in v naziv znanstveni sodelavec na Institutu "Jožef Stefan". Strokovno se zadnjih dvajset let ukvarja z izobraževanjem in vodenjem na področju planinstva ter gorništvu in si je pridobil sledeče strokovne nazive oz. kompetence: Gorski vodnik z IFMGA licenco, Inštruktor alpinizma, Gorski reševalec.

Dr. Debevec graduated from the Faculty of Sport, University of Ljubljana in 2006. He obtained his Ph.D. in 2011 for the work on different altitude/hypoxic & hyperoxic training modalities and their effects on athletic performance. During 2013/2014 he was a post-doctoral fellow at University of Cape Town, Faculty of Health Sciences Department of Human Biology, UCT/MRC Research Unit for Exercise Science and Sports Medicine. His research is primarily focused on investigating physiological adaptations of humans to different environmental stressors in health and disease. In 2015, he was elected as an Assistant Professor of Sport Science at the University of Ljubljana and to the position of Research Associate at the Jozef Stefan Institute (Ljubljana, Slovenia). During the last 20 years dr. Debevec collaborates in the mountaineering training and guiding on the national and local levels. He holds the following mountaineering related carnets/licenses: IFMGA mountain guide, Alpine climbing instructor, Mountain rescuer.

Izbrane publikacije / Selected publications

Kapus J., Mekjavić I.B., McDonnell A.C., Ušaj A., Vodičar J., Najdenov P., Jakovljević M., Jaki Mekjavić P., Žvan M. & Debevec T. Cardiorespiratory responses of adults and children during normoxic and hypoxic exercise. *International Journal of Sports Medicine*. (2017) 38(8): 627-636.

Debevec T., Millet G.P. & Pialoux V. Hypoxia-induced oxidative stress modulation with physical activity. *Frontiers in Physiology*. (2017) 8(84).

Debevec T., Simpson E.J., Mekjavić I.B., Eiken O. & Macdonald I.A. Effects of prolonged hypoxia and bed rest on appetite and appetite-related hormones. *Appetite*. (2016) 107: 28-37.

Debevec T., Pialoux V., Ehrström S., Ribon A., Eiken O., Mekjavić I.B. & Millet G.P. FemHab: The effects of bed rest and hypoxia on oxidative stress in healthy females. *Journal of Applied Physiology*. (2016) 120: 930–938.

Debevec T., Pialoux V., Saugy J., Schmitt L., Cejeuela R., Mury P., Ehrström S., Faiss R., Millet, G.P. Prooxidant/antioxidant balance in hypoxia: a cross-over study on normobaric vs. hypobaric "live high-train low". *PLOS ONE*. (2015) e0137957-1-e0137957-14.

Debevec T., Simpson E.J., Macdonald I.A., Eiken O. & Mekjavić I.B. Exercise training during normobaric hypoxic confinement does not alter hormonal appetite regulation. *PLOS ONE*. (2014) 9(6):e98874.

Debevec T., Pialoux V., Mekjavić I.B., Eiken O., Mury P. & Millet G.P. Moderate exercise blunts oxidative stress induced by normobaric hypoxic confinement. *Medicine & Science in Sports & Exercise*. (2014) 46(1):33-41.

Debevec T. & Mekjavić I.B. Short intermittent hypoxic exposures augment ventilation but do not alter cerebral and muscle oxygenation during hypoxic exercise. *Respir Physiol Neurobiol*. (2012) 118(2): 132-142.

Debevec T., Keramidias M.E., Norman B., Gustafsson T., Eiken O. & Mekjavić I.B. Acute short-term hyperoxia followed by mild hypoxia does not increase EPO production: resolving the "normobaric oxygen paradox". *Eur. J. Appl. Physiol*. (2012) 112(3): 1059-65.

Debevec T., Amon M., Keramidias M.E., Kounalakis S.N., Pišot R. & Mekjavić I.B. Normoxic and hypoxic performance following 4 weeks of normobaric hypoxic training. *Aviat. Space Environ. Med*. (2010). 81(4): 387-393.

Doc. Dr. Samo Rauter je na Fakulteti za šport, Univerze v Ljubljani diplomiral leta 2006 in postal doktor kinezioloških znanosti, leta 2012. Na Fakulteti za šport je zaposlen od leta 2012 in je bil leta 2017 izvoljen v naziv docent za področje kinezioloških znanosti. Od leta 2016 sodeluje tudi pri pedagoškem procesu predmeta Turno kolesarstvo. Hkrati je član strokovnega sveta na Kolesarski zvezi ter trener gorskih kolesarjev na najvišjem nivoju. Njegovo področje raziskovanja zajema tudi področje „kolesarstva“.

Doc. Dr. Samo Rauter graduated from the Faculty of Sport, University of Ljubljana in 2006. He received his PhD in 2012. Since 2012 he has been employed at the Faculty of sport. Since 2017, he was elected as an Assistant Professor of Sport Science at the University of Ljubljana. Since 2016, he cooperated by the pedagogical process of the subject Mountain bike touring. He also cooperated as coach of top level mountain bikers. His research is focused on investigating the field of cycling.

Izbrane publikacije / Selected publications

RAUTER, Samo, VODIČAR, Janez, ŠIMENKO, Jožef. Body asymmetries in young male road cyclists = Asimetrías corporales en ciclistas de carretera masculinos jóvenes. *International journal of morphology*, ISSN 0717-9502, 2017, vol. 35, no. 3, str. 907-912.

RAUTER, Samo. New approach for planning the mountain bike training with virtual coach. *Trends in Sport Science*, ISSN 2299-9590, 2018, vol. 25, no. 2, str. 69-74.

RAUTER, Samo, DOUPONA TOPIČ, Mojca. Sport activity and sport motives of mountain bikers and road cyclists = Aktywność sportowa i motywy kolarzy górskich i kolarzy szosowych. *Ido. Ruch dla Kultury*, ISSN 1730-2064, 2010, vol. 10, no. 1, str. 36-40

FISTER, Iztok, LJUBIČ FISTER, Karin, BREST, Janez, FISTER, Iztok, RAUTER, Samo. Avoiding over-training with data mining in process of mountain biking training. V: DOUPONA TOPIČ, Mojca (ur.), KAJTNA, Tanja (ur.). *Youth sport : abstract book*. Ljubljana: Faculty of Sport. 2014, str. 52.

RAUTER, Samo, MILIČ, Radoje, ŽELE, Luka, HVAŠTIJA, Martin, VODIČAR, Janez. Laboratorijske meritve in kriteriji uspešnosti pri kolesarjih mlajših kategorij. V: ERČULJ, Frane (ur.). *Kolesarstvo*, (Šport, ISSN 0353-7455, Letn. 63, št. 1-2, 2015). Ljubljana: Fakulteta za šport. 2015, letn. 63, št. 1/2, str. 161-167

JOŠT, Bojan, RAUTER, Samo, ULAGA, Maja, PUSTOVRH, Janez, VODIČAR, Janez. Razlike v strukturi gibalnih sposobnosti nekdanjega perspektivnega smučarskega skakalca, danes vrhunskega kolesarja. *Šport : revija za teoretična in praktična vprašanja športa*, ISSN 0353-7455, 2018, letn. 66, št. 1/2, str. 171-177.

RAUTER, Samo, MILIČ, Radoje, ŽELE, Luka, ŠIMENKO, Jožef, JUROV, Iva, VODIČAR, Janez. Anaerobna kapaciteta pri cestnih kolesarjih mlajših kategorij. *Šport : revija za teoretična in praktična vprašanja športa*, ISSN 0353-7455, 2018, letn. 66, št. 1/2, str. 178-182.

FISTER, Iztok, RAUTER, Samo, YANG, Xin-She, LJUBIČ FISTER, Karin, FISTER, Iztok. Planning the sports training sessions with the bat algorithm. *Neurocomputing*, ISSN 0925-2312. [Print ed.], 3 Feb. 2015, vol. 149, part B, str. 993-1002.

RAUTER, Samo, DOUPONA TOPIČ, Mojca, FISTER, Iztok. Mobile sport applications can make our cycling more sociable. V: DOUPONA TOPIČ, Mojca (ur.), KAJTNA, Tanja (ur.). *Youth sport : abstract book*. Ljubljana: Faculty of Sport. 2014, str. 41.

RAUTER, Samo, DOUPONA TOPIČ, Mojca. Perspectives of the sport-oriented public in Slovenia on extreme sports. *Kinesiology : international scientific journal of kinesiology and sport*, ISSN 1331-1441. [English ed.], 2011, vol. 43, no. 1, str. 82-90.

RAUTER, Samo, DOUPONA TOPIČ, Mojca. Runners as sport tourists : the experience and travel behavior[s] of Ljubljana marathon participants. *Collegium antropologicum*, ISSN 0350-6134, 2014, vol. 38, no. 3, str. 909-915

RAUTER, Samo. Mass sports events as a way of life (differences between the participants in a cycling and a running event) = Množične športne prireditve kot način življenja (razlike med udeleženci kolesarske in tekaške prireditve). *Kinesiologia Slovenica : scientific journal on sport*, ISSN 1318-2269. [Print ed.], 2014, vol. 20, no. 1, str. 5-15,

UŠAJ, Anton, RAUTER, Samo, SLUGA, Viktor, PUŠAVEC, Tadej, LUZNAR, Aleš, VODIČAR, Janez. Performance of soldiers during marching in mountains. V: UŠAJ, Anton (ur.), et al. *High altitude and isobaric hypoxia influence on human performance : science and practice : book of abstracts*. Ljubljana: Faculty of Sport. 2016, str. 27,