**Univerzitet u Novom Sadu**

Datum: 27.03.2013

**Pravilnik**

za vrednovanje publikovanih naučnih rezultata u časopisima za

**Stručno veće za tehničko-tehnološke nauke**

**Univerziteta u Novom Sadu**

**Uvod**

Predlog vrednovanja bazirano je na sledećim dokumentima:

1. PRAVILNIK o postupku i načinu vrednovanja, i kvantitativnom iskazivanju naučnoistraživačkih rezultata istraživača (Nacionalni savet za naučni i tehnološki razvoj), dostupno na sajtu:

<http://www.zbus.rs/cir/pdf/pravilnik_o_zvanjima.pdf>

1. Vrednovanje časopisa po naučnim oblastima na KoBSON-u dostupno na sajtu:

<http://kobson.nb.rs/servisi/pretrazivanje_casopisa.84.html>

1. Posebnim odlukama nadležnih Matičnih naučnih odbora (MNO) o vrednovanju naučnih časopisa, dostupno na sajtu:

<http://www.kobson.nb.rs/nauka_u_srbiji/kategorizacija_casopisa_.33.html>

**Kategorizacija časopisa koji imaju Impakt Faktor**

Evidenciju časopisa po kategorijama M21, M22 i M23 vodi Narodna biblioteka Srbije. Ovi podaci su javno dostupnu na sajtu (<http://kobson.nb.rs/servisi/pretrazivanje_casopisa.84.html>). Matični naučni odbori Ministarstva koriste ove podatke za klasifikaciju časopisa. Međutim, postoje slučajevi kada za neka godišta časopisa ne postoje podaci o Impakt Faktoru (IF). Dakle, određivanje kategorije časopisa na osnovi IF za godine u kojima nema podataka o IF potrebno je dodatno definisati. Postoji više razloga za nedostajanje IF za pojedina godišta. Na primer, jedan od razloga može biti da uredništvo časopisa nije dostavilo, ili je kasno dostavilo potrebnu dokumentaciju Tomson Rojtersu. Drugi razlog može biti da časopis ne ispunjava sve uslove za dodelu IF. Pored toga, na sajtu <http://kobson.nb.rs/servisi/pretrazivanje_casopisa.84.html>, postoje periodi godišta u kojima nijedan časopis nema informaciju o IF.

Analizom javno dostupnih podataka o IF za časopise utvrđeno je sledeće:

* Godina 1981. je najranija godina u kojoj se pojavljuju IF.
* Postoje časopisi kojima nedostaju IF za pojedina godišta.
* Podaci o IF ne postoje ni za jedan časopis u sledećim godinama: 1989-1991, 1993-1997. Podaci o IF za časopise koji pripadaju društvenim naukama ne postoje ni za 1992. godinu.

Na osnovu navedenih podataka posebno treba razmatrati određivanje kategorija časopisa za godišta u kojima nedostaju IF. To su godišta pre 1981. godine, a zatim i periodi od 1989 do 1997 godine. To znači da je potrebno definisati pravila za određivanje kategorije časopisa za sledeće slučajeve:

1. Određivanje kategorije časopisa za godine u kojima postoje podaci o IF.
2. Određivanje kategorija časopisa za godišta pre 1981. godine.
3. Određivanje kategorije časopisa za godine u kojima ne postoje podaci o IF časopisa, ali koje su u neposrednoj blizini godina u kojima časopis ima IF, odnosno pripada nekoj od kategorija po Pravilniku Ministarstva (M21, M22, M23).
4. Određivanje kategorije časopisa za godišta od 1989 do 1997 godine.
5. Određivanje kategorije časopisa za sva godišta koja nisu obuhvaćena prethodnim stavkama.

Časopis može da bude rangiran u više naučnih disciplina u listama koje objavljuje Tomson Rojters. Dakle, iako ima jedan IF za određenu godinu, časopis može da u jednoj naučnoj disciplini bude bolje rangiran nego u drugoj zavisno od ostalih časopisa koji pripadaju tim disciplinama. To znači da časopis za istu godinu može da ima različite kategorije u različitim disciplinama. Na primer, u **tabeli 1** prikazani su dvogodišnji impakt faktori za časopis *Journal of the American Society for Information Science and Technology* u periodu 2001-2009. U trećoj i četvrtoj vrsti su navedene pozicije časopisa u odgovarajućim naučnim disciplinama.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Godina | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| Impakt faktor | 1.641 | 1.773 | 1.473 | 2.086 | 1.583 | 1.555 | 1.436 | 1.954 | 2.300 |
| Disciplina: Computer Science, Information Systems | 11/73 | 9/76 | 18/78 | 12/78 | 20/83 | 22/87 | 29/92 | 25/99 | 19/116 |
| Disciplina: Information Science & Library Science | 4/55 | 3/55 | 7/55 | 6/54 | 6/55 | 6/53 | 13/56 | 12/61 | 7/65 |

**Tabela 1.** Podaci za časopis *Journal of the American Society for Information Science and Technology*

Časopis „Journal of the American Society for Information Science and Technology“ u 2007. godini pripada naučnim disciplinama „Computer Science, Information Systems“ i „Information Science & Library Science“. Unutar prve naučne discipline časopis je na 29 mesto od 92 i pripada kategoriji M22 (u svojoj disciplini je svrstan između prvih 30% i 50%). Unutar druge naučne discipline časopis zauzima 13 mesto od 56 časopisa i pripada kategoriji M21 (u svojoj disciplini je svrstan među prvih 30%).

Pošto stručna veća treba da odrede kategoriju nekog časopisa u odgovarajućoj naučnoj oblasti, potrebno je prvo za svaku Užu Naučnu Oblast (UNO) odrediti koje joj pripadaju naučne discipline po Tomson Rojters-u kao i koje joj pripadaju liste Matičnih Naučnih Odbora (MNO) resornog Ministarstva Republike Srbije. Nakon toga potrebno je odrediti pravilo koje će utvrditi kako se određuje kategorija časopisa koji ima objavljen IF u više naučnih disciplina. U **Prilogu 1** su za usvojene UNO navedene naučne discipline po Tomson Rojters-u, a u **Prilogu 2** su za usvojene UNO navedene Liste MNO.

Za određivanje kategorije časopisa u zavisnosti od naučnih disciplina usvojeno je sledeće Pravilo:

**Pravilo 1.** Ako је časopis koji treba da se kategoriše u određenoj naučnoj oblasti, za određenu godinu kategorisan u barem jednoj od usvojenih naučnih disciplina te naučne oblasti, tada se za kategoriju tog časopisa usvaja najpovoljnija kategorija časopisa unutar tih usvojenih disciplina. Ako časopis za određenu godinu nije kategorisan ni u jednoj od usvojenih naučnih disciplina te naučne oblasti, tada se za kategoriju tog časopisa usvaja najmanja kategorija časopisa unutar svih disciplina u kojima je časopis kategorisan.

Pošto je 1981. najranija godina u kojoj se pojavljuju IF to znači da su časopisi, koji su za ovu godinu imali IF, i pre 1981. imali značajan rejting. Ako je časopis poboljšao svoj rejting u periodu 1981-1983 to takođe ukazuje na rejting časopisa i u godinama pre 1981. Na osnovu ovog usvojeno je sledeće Pravilo:

**Pravilo 2**. Ako časopis ima IF za 1981. godinu tada se svim godištima pre 1981. godine dodeljuje najpovoljnija kategorija koju je taj časopisa ostvario u periodu 1981-1983.

Analizom podataka o IF za časopise utvrđeno je da postoje časopisi kojima nedostaju IF za pojedina godišta a da je očuvan kvalitet časopisa. Na primer, u **tabeli 2** prikazani su dvogodišnji impakt faktori za časopis *Advances in Chemical Physics* u periodu 2001-2010, kao i odgovarajuće kategorije nakon primene prva dva pravila. Međutim, podaci o IF ne postoje za godišta od 2004 do 2008 godine. U ovim

slučajevima usvojeno je sledeće Pravilo:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Godina | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Impakt faktor | 2.828 | 2.095 | 2.105 | - | - | - | - | - | 2.471 | 4.294 |
| Oblast:  Physics, Atomic, Molecular & Chemical | 6/30 | 12/31 | 9/33 | - | - | - | - | - | 11/33 | 4/33 |
| Kategorija | M21 | M22 | M21 |  |  |  |  |  | M22 | M21 |

**Tabela 2.** Podaci za ćasopis *Advances in Chemical Physics*

**Pravilo 3**. Ako časopis za neku godinu nema podataka za IF na osnovu kojeg bi mu se odredila kategorija, onda mu se za tu godinu dodeljuje najpovoljnija kategorija iz perioda od tri godine (godina pre, godina publikovanja i godina posle publikovanja ili dve godine pre publikovanja i godina publikovanja).

Posle primene Pravila 3 za časopis sa podacima u tabeli 2 godištima 2004 i 2005 dodeljuje se kategorija M21, a godištu 2008 dodeljuje se kategorija M22. Međutim, časopis za godišta 2006 i 2007 nakon primene pravila 3 ostaje bez kategorije međunarodnog časopisa (ovakvi slučajevi pokriveni su Pravilom 5).

Kao što je prethodno rečeno podaci o IF ne postoje ni za jedan časopis u godinama: 1989-1991, 1993-1997, a podaci o IF za časopise koji pripadaju društvenim naukama ne postoje ni za 1992. godinu. Na primer, u **tabeli 3** prikazani su dvogodišnji impakt faktori za časopis *Essays in Biochemistry* u periodu 1988-1998, kao i odgovarajuće kategorije dobijene nakon primene prva tri pravila.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Godina | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
| Impakt faktor | 3.556 | - | - | - | - | - | - | - | - | - | 0.905 |
| Oblast: Biochemistry & Molecular Biology | 27/151 | - | - | - | - | - | - | - | - | - | 214/295 |
| Kategorija | M21 | M21 | M21 |  |  |  |  |  |  | M23 | M23 |

**Tabela 3.** Podaci za časopis *Essays in Biochemistry*

Očigledno je da zbog ovog velikog niza godina bez IF nakon primene pravila 3 časopis neće imati kategoriju u svim ovim godinama. Zbog toga je usvojeno sledeće pravilo:

**Pravilo 4.** Za sve godine od 1989. do 1997. još jedanput se primenjuje pravilo 3, pri čemu sada susedne godine mogu imati i kategoriju koja je časopisu dodeljena prvom primenom pravila 3 na časopis. Ako posle toga postoje godišta časopisa iz intervala od 1988. do 1997. koja nemaju kategorije tada se tim godištima dodeljuje vrednost vremenski najbliže poznate kategorije tog časopisa iz perioda 1989-1997. Ukoliko za neko godište postoje dve različite kategorije na istom vremenskom rastojanju tada se uzima povoljnija od njih.

Posle primene svih do sada navedenih pravila moguće je da ni jedno godište iz periodu 1989-1997 nije dobilo kategorizaciju jedino ako časopis pored nedostajućih IF za 1989-1991 i 1993-1997 nije imao IF ni 1985, 1986, 1987, 1988, 1992, 1998, 1999.

Posle primene Pravila 4 za časopis sa podacima u tabeli 4 godišta 1989, 1990, 1991, 1992, 1993 i 1994 dobijaju kategoriju M21, a godišta 1995, 1996 i 1997 dobijaju kategoriju M23.

Za časopise koji nisu dobili kategorizaciju posle primene prethodno navedenih pravila usvojeno je sledeće Pravilo:

**Pravilo 5**. Ako posle primene Pravila 1, 2, 3 i 4 za posmatrani časopis ostanu još godišta kojima nije dodeljena kategorija, tim godištima se dodeljuje kategorija M52 (Časopis nacionalnog značaja).

Vrednovanje naučnih rezultata objavljenih u časopisima. Na kraju ostaje da se vrednuje publikovani rad u časopisu. Za ovo se takođe mogu usvojiti različita pravila. Evidentno je da od momenta recenzija do momenta objavljivanja rada u međunarodnom časopisu prođe neko vreme pa je opravdano gledati i kategorije časopisa u godinama koje su prethodile godini u kojoj je rad objavljen. Isto tako, rad može uticati na dobijanje bolje kategorije časopisa u godinama koje slede godinu u kojoj je rad objavljen. Iz ovih razloga usvojeno je sledeće Pravilo:

**Pravilo 6.** Ako časopis u periodu dve godine pre objavljivanja do jedne godine posle objavljivanja rada ima IF, rad će dobiti najpovoljniju kategoriju časopisa u kojem je objavljen iz ovog perioda, u suprotnom rad će dobiti broj poena koji po Pravilniku Ministarstva odgovara kategoriji časopisa u godini u kojoj je rad objavljen.

Ovim pravilom je obezbeđeno da se radu publikovan u časopisu može dodeliti najpovoljnija kategorija samo iz perioda od tri godine (godina pre, godina publikovanja i godina posle publikovanja ili dve godine pre publikovanja i godina publikovanja).

Navedenim pravilima se određuje kategorija rada publikovanog u časopisu. Pravilnikom Ministarstva je predviđeno da se autoru efektivni broj poena za publikovani rad dodeljuje u zavisnosti od broja autora po pravilima koje za datu naučnu oblast utvrđuje nadležni matični naučni odbor, što takođe može biti podržano servisom softverskog sistema CRIS UNS.

## Kategorizacija časopisa bez Impakt Faktora

Pravila navedena u prethodnom odeljku pokrivaju sve časopise koji su bar u nekom periodu svog izlaženja imali impakt faktor. Ostale kategorije časopisa su:

* Časopis međunarodnog značaja verifikovanog posebnom odlukom (M24)
* Vodeći časopis nacionalnog značaja (M51)
* Časopis nacionalnog značaja (M52)
* Naučni časopis (M53)

Matični naučni odbori Ministarstva za svoje naučne oblasti izdaju godišnje listu časopisa po prethodno navedenoj klasifikaciji. Ove liste za tehničko-tehnološke nauke postoje od 2009. godine. Dakle, za ove godine časopisi dobijaju kategorije navedene u ovim listama. Za ostale godine potrebno je dodatno odrediti kategorizaciju tih časopisa. Za ovu kategorizaciju usvojeno je sledeće pravilo:

**Pravilo 7.** Časopisi koji su na listama Ministarstva u bar jednoj godini u periodu 2009-2011 imali kategoriju M24 u svim prethodnim godinama dobijaju kategoriju M51. Ostali časopisi koji se nalaze na listi dobijaju za sve prethodne godine najpovoljniju kategoriju iz perioda 2009-2011 godine.

Primena navedenih pravila se može automatizovati što je i urađeno u sistemu CRIS UNS. Naravno, nakon primene ovih pravila komisija na osnovu svog stručnog mišljenja ili na osnovu nekih drugih bibliometrijskih parametara može eksplicitno promeniti kategoriju nekog časopisa za određenu godinu. Za svaku promenu kategorije mora postojati obrazloženje dostupno javnosti.

Ukoliko neki časopis dobije impakt faktor (dospe na SCI listu), vrši se rekategorizacija po odgovarajućim Pravilima. Ukoliko za neke godine na osnovu različitih pravila časopis dobije različite kategorije usvojiće se povoljnija kategorija.

**PRILOG 1: Naučne discipline po Tomson Rojters-u:**

**UNO: Automatika i upravljanje sistemima**

23 Automation & Control Systems

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

60 Computer Science, Interdisciplinary Applications

79 Education & Educational Research

80 Education, Scientific Disciplines

86 Energy & Fuels

87 Engineering (current - Engineering, …)

89 Engineering, Biomedical

92 Engineering, Electrical & Electronic

99 Engineering, Multidisciplinary

142 Instruments & Instrumentation

163 Materials Science, Biomaterials

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

177 Medical Informatics

182 Medicine, Research & Experimental

191 Multidisciplinary Sciences

196 Neurosciences

203 Operations Research & Management Science

253 Rehabilitation

256 Remote Sensing

**UNO:Automatika i upravljanje sistemima - biomedicinski inženjering**

23 Automation & Control Systems

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

60 Computer Science, Interdisciplinary Applications

79 Education & Educational Research

80 Education, Scientific Disciplines

86 Energy & Fuels

87 Engineering (current - Engineering, …)

89 Engineering, Biomedical

92 Engineering, Electrical & Electronic

99 Engineering, Multidisciplinary

142 Instruments & Instrumentation

163 Materials Science, Biomaterials

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

177 Medical Informatics

182 Medicine, Research & Experimental

191 Multidisciplinary Sciences

196 Neurosciences

203 Operations Research & Management Science

253 Rehabilitation

256 Remote Sensing

**UNO: Automatika i upravljanje sistemima - geoinformatika**

8 Agriculture, Multidisciplinary

21 Astronomy & Astrophisics

23 Automation & Control Systems

59 Computer Science, Information Systems

60 Computer Sciences, Interdisciplinary Applications

63 Construction & Building Technology

77 Ecology

79 Education & Educational Research

80 Education, Scientific Disciplines

93 Engineering, Environmental

94 Engineering, Geological

99 Engineering, Multidisciplinary

103 Environmental Sciences

117 Geochemistry & Geophysics

119 Geography, Physical

120 Geology

121 Geosiences (current - Geosciences, Interdisciplinary)

122 Geosciences, Multidisciplinary (Geodesy, Photogrametry, Cartography and GIS)

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

191 Multidisciplinary Sciences

256 Remote Sensing

268 Soil Science

**UNO: Teorije i interpretacije geometrijskog prostora u arhitekturi i urbanizmu**

15 Archaeology (AHCi)

16 Archeology

17 Architecture (AHCi)

18 Area Studies

19 Art (AHCi)

55 Computer Applications & Cybernetics

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

61 Computer Science, Software Engineering

62 Computer Science, Theory & Methods

63 Construction & Building Technology

77 Ecology

79 Education & Educational Research

80 Education, Scientific Disciplines

81 Education, Special

91 Engineering, Civil

93 Engineering, Environmental

99 Engineering, Multidisciplinary

103 Environmental Sciences

104 Environmental Studies

130 History & Philosophy of Science

131 History & Philosophy of Science (AHCi)

137 Imaging Science & Photographic Technology

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

191 Multidisciplinary Sciences

256 Remote Sensing

264 Social Sciences, Interdisciplinary

282 Urban Studies

**UNO: Mehanika deformabilnog tela (KatedraZamehaniku-054)**

2 Aerospace Engineering & Technology (current - Engineering, Aerospace)

31 Biophysics

72 Dentistry & Odontology (current - Dentistry, Oral Surgery & Medicine)

79 Education & Educational Research

87 Engineering (current - Engineering, …)

88 Engineering, Aerospace

89 Engineering, Biomedical

91 Engineering, Civil

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

168 Materials Science, Multidisciplinary

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

191 Multidisciplinary Sciences

194 Nanoscience & Nanotechnology

219 Physics, Applied

222 Physics, Fluids & Plasmas

223 Physics, General (current - Physics, ...)

224 Physics, Mathematical

226 Physics, Multidisciplinary

276 Thermodynamics

**UNO: Mehanika (KatedraZamehaniku-054)**

1 Acoustics

23 Automation & Control Systems

31 Biophysics

79 Education & Educational Research

80 Education, Scientific Disciplines

87 Engineering (current - Engineering, …)

89 Engineering, Biomedical

91 Engineering, Civil

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

168 Materials Science, Multidisciplinary

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

218 Physics (current - Physics, ...)

219 Physics, Applied

222 Physics, Fluids & Plasmas

223 Physics, General (current - Physics, ...)

224 Physics, Mathematical

276 Thermodynamics

**UNO: Biomehanika (KatedraZamehaniku-054)**

31 Biophysics

72 Dentistry & Odontology (current - Dentistry, Oral Surgery & Medicine)

79 Education & Educational Research

80 Education, Scientific Disciplines

87 Engineering (current - Engineering, …)

89 Engineering, Biomedical

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

218 Physics (current - Physics, ...)

219 Physics, Applied

222 Physics, Fluids & Plasmas

223 Physics, General (current - Physics, ...)

224 Physics, Mathematical

276 Thermodynamics

**UNO: Računarska grafika**

17. Architecture (AHCi)

19. Art (AHCi)

59. Computer Science, Information Systems

60. Computer Science, Interdisciplinary Applications

61. Computer Science, Software Engineering

62. Computer Science, Theory & Methods

79. Education & Educational Research

80. Education, Scientific Disciplines

91. Engineering, Civil

92. Engineering, Electrical & Electronic

96. Engineering, Manufacturing

98. Engineering, Mechanical

99. Engineering, Multidisciplinary

110. Film, Radio, Television (AHCi)

135. Humanities, Multidisciplinary (AHCi)

137. Imaging Science & Photographic Technology

173. Mathematics, Applied

174. Mathematics, Interdisciplinary Applications

177. Medical Informatics

191. Multidisciplinary Sciences

**UNO: Električna merenja**

58 Computer Science, Hardware & Architecture

60 Computer Science, Interdisciplinary Applications

61 Computer Science, Software Engineering

80 Education, Scientific Disciplines

87 Engineering (current - Engineering, …)

92 Engineering, Electrical & Electronic

99 Engineering, Multidisciplinary

142 Instruments & Instrumentation

256 Remote Sensing

**UNO: Logistika i intermodalni transport**

8 Agriculture, Multidisciplinary

23 Automation & Control Systems

34 Business

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

62 Computer Science, Theory & Methods

77 Ecology

78 Economics

79 Education & Educational Research

80 Education, Scientific Disciplines

87 Engineering (current - Engineering, …)

93 Engineering, Environmental

95 Engineering, Industrial

96 Engineering, Manufacturing

99 Engineering, Multidisciplinary

103 Environmental Sciences

113 Food Science & Technology

125 Health Care Sciences & Services

160 Management

168 Materials Science, Multidisciplinary

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

191 Multidisciplinary Sciences

203 Operations Research & Management Science

264 Social Sciences, Interdisciplinary

279 Transportation

280 Transportation Science & Technology

282 Urban Studies

**UNO: Telekomunikacije i obrada signala**

1 Acoustics

4 Agricultural Engineering

8 Agriculture, Multidisciplinary

22 Audiology & Speech-language Pathology

23 Automation & Control Systems

32 Biotechnology & Applied Microbiology

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

57 Computer Science, Cybernetics

58 Computer Science, Hardware & Architecture

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

61 Computer Science, Software Engineering

62 Computer Science, Theory & Methods

63 Construction & Building Technology

77 Ecology

79 Education & Educational Research

80 Education, Scientific Disciplines

86 Energy & Fuels

87 Engineering (current - Engineering, …)

88 Engineering, Aerospace

89 Engineering, Biomedical

91 Engineering, Civil

92 Engineering, Electrical & Electronic

93 Engineering, Environmental

95 Engineering, Industrial

96 Engineering, Manufacturing

99 Engineering, Multidisciplinary

103 Environmental Sciences

104 Environmental Studies

114 Forestry

121 Geosciences (current - Geosciences, Interdisciplinary)

122 Geosciences, Multidisciplinary

125 Health Care Sciences & Services

137 Imaging Science & Photographic Technology

142 Instruments & Instrumentation

149 Linguistics

168 Materials Science, Multidisciplinary

171 Mathematical & Computational Biology

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

177 Medical Informatics

178 Medical Laboratory Technology

182 Medicine, Research & Experimental

191 Multidisciplinary Sciences

194 Nanoscience & Nanotechnology

195 Neuroimaging

196 Neurosciences

205 Optics

219 Physics, Applied

226 Physics, Multidisciplinary

252 Radiology, Nuclear Medicine & Medical Imaging

256 Remote Sensing

261 Robotics

271 Statistics & Probability

274 Telecommunications

280 Transportation Science & Technology

**UNO: Organizacija, tehnologija građenja i menadžment**

56 Computer Science, Artificial Intelligence

60 Computer Science, Interdisciplinary Applications

63 Construction & Building Technology

78 Economics

79 Education & Educational Research

87 Engineering (current - Engineering, …)

91 Engineering, Civil

99 Engineering, Multidisciplinary

160 Management

203 Operations Research & Management Science

249 Public Health (current - Public, Environmental & Occupational Health)

250 Public, Environmental & Occupational Health

**UNO: Zgradarstvo-građevinske i arhitektonske konstrukcije**

17 Architecture (AHCi)

63 Construction & Building Technology

79 Education & Educational Research

87 Engineering (current - Engineering, …)

91 Engineering, Civil

99 Engineering, Multidisciplinary

103 Environmental Sciences

104 Environmental Studies

**UNO: Poštanski saobraćaj i komunikacije**

23 Automation & Control Systems

34 Business

56 Computer Science, Artificial Intelligence

57 Computer Science, Cybernetics

58 Computer Science, Hardware & Architecture

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

61 Computer Science, Software Engineering

62 Computer Science, Theory & Methods

71 Demography

78 Economics

79 Education & Educational Research

80 Education, Scientific Disciplines

81 Education, Special

87 Engineering (current - Engineering, …)

92 Engineering, Electrical & Electronic

99 Engineering, Multidisciplinary

105 Ergonomics

141 Information Science & Library Science

159 Logic

160 Management

168 Materials Science, Multidisciplinary

172 Mathematics

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

191 Multidisciplinary Sciences

203 Operations Research & Management Science

230 Planning & Development

248 Public Administration

264 Social Sciences, Interdisciplinary

265 Social Sciences, Mathematical Methods

271 Statistics & Probability

274 Telecommunications

279 Transportation

280 Transportation Science & Technology

282 Urban Studies

**UNO: Građevinski materijali, procena stanja i sanacija konstrukcija**

63 Construction & Building Technology

79 Education & Educational Research

87 Engineering (current - Engineering, …)

90 Engineering, Chemical

91 Engineering, Civil

92 Engineering, Electrical & Electronic

93 Engineering, Environmental

162 Materials Science (current - Materials Science, …)

164 Materials Science, Ceramics

165 Materials Science, Characterization & Testing

167 Materials Science, Composites

168 Materials Science, Multidisciplinary

234 Polymer Science

**UNO: Umetnost primenjena na arhitekturu, tehniku i dizajn**

17 Architecture (AHCi)

19 Art (AHCi)

63 Construction & Building Technology

67 Cultural Studies

68 Culutural Studies (AHCi)

70 Dance (AHCi)

79 Education & Educational Research

91 Engineering, Civil

92 Engineering, Electrical & Electronic

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

104 Environmental Studies

110 Film, Radio, Television (AHCi)

128 History

129 History (AHCi)

135 Humanities, Multidisciplinary (AHCi)

150 Literary Theory & Criticism

160 Management

168 Materials Science, Multidisciplinary

191 Multidisciplinary Sciences

192 Music (AHCi)

215 Philosophy (AHCi)

232 Poetry (AHCi)

275 Theater (AHCi)

**UNO: Elektronika**

23 Automation & Control Systems

Biochemistry & Molecular Biology

31 Biophysics

41 Ceramics Chemistry

44 Chemistry, Applied

49 Chemistry, Multidisciplinary

51 Chemistry, Physical

54 Communication

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

57 Computer Science, Cybernetics

58 Computer Science, Hardware & Architecture

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

61 Computer Science, Software Engineering

62 Computer Science, Theory & Methods

79 Education & Educational Research

80 Education, Scientific Disciplines

82 Electrochemistry

86 Energy & Fuels

87 Engineering (current - Engineering, …)

89 Engineering, Biomedical

90 Engineering, Chemical

91 Engineering, Civil

92 Engineering, Electrical & Electronic

94 Engineering, Geological

95 Engineering, Industrial

96 Engineering, Manufacturing

97 Engineering, Marine

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

121 Geosciences (current - Geosciences, Interdisciplinary)

122 Geosciences, Multidisciplinary

142 Instruments & Instrumentation

162 Materials Science (current - Materials Science, …)

163 Materials Science, Biomaterials

164 Materials Science, Ceramics

165 Materials Science, Characterization & Testing

166 Materials Science, Coatings & Films

167 Materials Science, Composites

168 Materials Science, Multidisciplinary

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

175 Mechanics

191 Multidisciplinary Sciences

194 Nanoscience & Nanotechnology

197 Nuclear Science & Technology

203 Operations Research & Management Science

205 Optics

218 Physics (current - Physics, ...)

219 Physics, Applied

220 Physics, Atomic, Molecular & Chemical

221 Physics, Condensed Matter

226 Physics, Multidisciplinary

227 Physics, Nuclear

256 Remote Sensing

261 Robotics

269 Spectroscopy

274 Telecommunications

**UNO: Geodezija i geoinformatika**

21 Astronomy & Astrophisics

60 Computer Sciences, Interdisciplinary Applications

121 Geosiences (current - Geosciences, Interdisciplinary)

122 Geosciences, Multidisciplinary (Geodesy, Photogrametry, Cartography and GIS)

256 Remote Sensing

**UNO: Planiranje, regulisanje i bezbednost saobraćaja**

23 Automation & Control Systems

24 Behavioral Sciences

54 Communication

55 Computer Applications & Cybernetics (current - Computer Science, ...)

56 Computer Science, Artificial Intelligence

59 Computer Science, Information Systems

60 Computer Science, Interdisciplinary Applications

77 Ecology

78 Economics

79 Education & Educational Research

80 Education, Scientific Disciplines

86 Energy & Fuels

87 Engineering (current - Engineering, …)

91 Engineering, Civil

93 Engineering, Environmental

98 Engineering, Mechanical

99 Engineering, Multidisciplinary

103 Environmental Sciences

105 Ergonomics

125 Health Care Sciences & Services

160 Management

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

191 Multidisciplinary Sciences

203 Operations Research & Management Science

217 Photographic Technology (current - Imaging Science & Photographic Technol.)

230 Planning & Development

237 Psychology

238 Psychology, Applied

242 Psychology, Educational

243 Psychology, Experimental

245 Psychology, Multidisciplinary

249 Public Health (current - Public, Environmental & Occupational Health)

250 Public, Environmental & Occupational Health

271 Statistics & Probability

279 Transportation

280 Transportation Science & Technology

282 Urban Studies

**UNO: Kvalitet, efektivnost i logistika**

34 Business

59 Computer Science, Information Systems

77 Ecology

78 Economics

79 Education & Educational Research

87 Engineering (current - Engineering, …)

93 Engineering, Environmental

95 Engineering, Industrial

96 Engineering, Manufacturing

99 Engineering, Multidisciplinary

103 Environmental Sciences

104 Environmental Studies

160 Management

173 Mathematics, Applied

174 Mathematics, Interdisciplinary Applications

203 Operations Research & Management Science

230 Planning & Development

271 Statistics & Probability

279 Transportation

280 Transportation Science & Technology

**UNO: Mehanika fluida**

1. Acoustics

2. Aerospace Engineering & Technology (current - Engineering, Aerospace)

8. Agriculture, Multidisciplinary

23. Automation & Control Systems

55. Computer Applications & Cybernetics (current - Computer Science, ...)

56. Computer Science, Artificial Intelligence

60. Computer Science, Interdisciplinary Applications

63. Construction & Building Technology

79. Education & Educational Research

80. Education, Scientific Disciplines

81. Education, Special

86. Energy & Fuels

87. Engineering (current - Engineering, …)

88. Engineering, Aerospace

90. Engineering, Chemical

91. Engineering, Civil

93. Engineering, Environmental

95. Engineering, Industrial

96. Engineering, Manufacturing

97. Engineering, Marine

98. Engineering, Mechanical

99. Engineering, Multidisciplinary

100. Engineering, Ocean

101. Engineering, Petroleum

103. Environmental Sciences

104. Environmental Studies

113. Food Science & Technology

139. Industrial Relations & Labor

142. Instruments & Instrumentation

162. Materials Science (current - Materials Science, …)

163. Materials Science, Biomaterial

165. Materials Science, Characterization & Testing

166. Materials Science, Coatings & Films

167. Materials Science, Composites

168. Materials Science, Multidisciplinary

172. Mathematics

173. Mathematics, Applied

174. Mathematics, Interdisciplinary Applications

175. Mechanics

184. Metallurgy & Metallurgical Engineering

185. Metallurgy & Mining (current - relevant discipline)

186. Meteorology & Atmospheric Sciences

188. Microscopy

190. Mining & Mineral Processing

191. Multidisciplinary Sciences

194. Nanoscience & Nanotechnology

197. Nuclear Science & Technology

203. Operations Research & Management Science

205. Optics

218. Physics (curent, Physics,...)

219. Physics, Applied

220. Physics, Atomic, Molecular & Chemical

221. Physics, Condensed Matter

222. Physics, Fluids & Plasmas

223. Physics, General (current - Physics, ...)

224 .Physics, Mathematical

225. Physics, Miscellaneous (current - Physics, ...)

226. Physics, Multidisciplinary

227. Physics, Nuclear

228. Physics, Particles & Fields

230. Planning & Development

234. Polymer Science

243. Psychology, Experimental

244. Psychology, Mathematical

245. Psychology, Multidisciplinary

246. Psychology, Psychoanalysis

256. Remote Sensing

261. Robotics

268. Soil Science

269. Spectroscopy

276. Thermodynamics

279. Transportation

280. Transportation Science & Technology

286. Water Resources

287. Welding Technology (current - relevant discipline)

**UNO: Hidropneumatska tehnika**

1. Acoustics

2. Aerospace Engineering & Technology (current - Engineering, Aerospace)

8. Agriculture, Multidisciplinary

23. Automation & Control Systems

55. Computer Applications & Cybernetics (current - Computer Science, ...)

56. Computer Science, Artificial Intelligence

60. Computer Science, Interdisciplinary Applications

63. Construction & Building Technology

79. Education & Educational Research

80. Education, Scientific Disciplines

81. Education, Special

86. Energy & Fuels

87. Engineering (current - Engineering, …)

88. Engineering, Aerospace

91. Engineering, Civil

93. Engineering, Environmental

95. Engineering, Industrial

96. Engineering, Manufacturing

97. Engineering, Marine

98. Engineering, Mechanical

99. Engineering, Multidisciplinary

100. Engineering, Ocean

101. Engineering, Petroleum

103. Environmental Sciences

104. Environmental Studies

113. Food Science & Technology

139. Industrial Relations & Labor

142. Instruments & Instrumentation

162. Materials Science (current - Materials Science, …)

163. Materials Science, Biomaterial

165. Materials Science, Characterization & Testing

166. Materials Science, Coatings & Films

167. Materials Science, Composites

168. Materials Science, Multidisciplinary

172. Mathematics

173. Mathematics, Applied

174. Mathematics, Interdisciplinary Applications

175. Mechanics

184. Metallurgy & Metallurgical Engineering

185. Metallurgy & Mining (current - relevant discipline)

188. Microscopy

190. Mining & Mineral Processing

191. Multidisciplinary Sciences

194. Nanoscience & Nanotechnology

197. Nuclear Science & Technology

203. Operations Research & Management Science

205. Optics

218. Physics (curent, Physics,...)

219. Physics, Applied

220. Physics, Atomic, Molecular & Chemical

221. Physics, Condensed Matter

222. Physics, Fluids & Plasmas

223. Physics, General (current - Physics, ...)

224 .Physics, Mathematical

225. Physics, Miscellaneous (current - Physics, ...)

226. Physics, Multidisciplinary

227. Physics, Nuclear

228. Physics, Particles & Fields

230. Planning & Development

256. Remote Sensing

261. Robotics

268. Soil Science

269. Spectroscopy

276. Thermodynamics

279. Transportation

280. Transportation Science & Technology

286. Water Resources

287. Welding Technology (current - relevant discipline)

**UNO: Gasna i naftna tehnika**

1. Acoustics

2. Aerospace Engineering & Technology (current - Engineering, Aerospace)

8. Agriculture, Multidisciplinary

23. Automation & Control Systems

55. Computer Applications & Cybernetics (current - Computer Science, ...)

56. Computer Science, Artificial Intelligence

60. Computer Science, Interdisciplinary Applications

63. Construction & Building Technology

79. Education & Educational Research

80. Education, Scientific Disciplines

81. Education, Special

86. Energy & Fuels

87. Engineering (current - Engineering, …)

88. Engineering, Aerospace

90. Engineering, Chemical

91. Engineering, Civil

93. Engineering, Environmental

95. Engineering, Industrial

96. Engineering, Manufacturing

97. Engineering, Marine

98. Engineering, Mechanical

99. Engineering, Multidisciplinary

100. Engineering, Ocean

101. Engineering, Petroleum

103. Environmental Sciences

104. Environmental Studies

113. Food Science & Technology

139. Industrial Relations & Labor

142. Instruments & Instrumentation

162. Materials Science (current - Materials Science, …)

163. Materials Science, Biomaterial

165. Materials Science, Characterization & Testing

166. Materials Science, Coatings & Films

167. Materials Science, Composites

168. Materials Science, Multidisciplinary

172. Mathematics

173. Mathematics, Applied

174. Mathematics, Interdisciplinary Applications

175. Mechanics

184. Metallurgy & Metallurgical Engineering

185. Metallurgy & Mining (current - relevant discipline)

188. Microscopy

190. Mining & Mineral Processing

191. Multidisciplinary Sciences

194. Nanoscience & Nanotechnology

197. Nuclear Science & Technology

203. Operations Research & Management Science

205. Optics

218. Physics (curent, Physics,...)

219. Physics, Applied

220. Physics, Atomic, Molecular & Chemical

221. Physics, Condensed Matter

222. Physics, Fluids & Plasmas

223. Physics, General (current - Physics, ...)

224 .Physics, Mathematical

225. Physics, Miscellaneous (current - Physics, ...)

226. Physics, Multidisciplinary

227. Physics, Nuclear

228. Physics, Particles & Fields

230. Planning & Development

256. Remote Sensing

261. Robotics

268. Soil Science

269. Spectroscopy

276. Thermodynamics

279. Transportation

280. Transportation Science & Technology

286. Water Resources

287. Welding Technology (current - relevant discipline)

**UNO: Primenjene računarske nauke i informatika**

Automation & Control Systems

Computer Applications & Cybernetics (current - Computer Science, ...)

Computer Science, Artificial Intelligence

Computer Science, Cybernetics

Computer Science, Hardware & Architecture

Computer Science, Information Systems

Computer Science, Interdisciplinary Applications

Computer Science, Software Engineering

Computer Science, Theory & Methods

Engineering, Multidisciplinary

Information Science & Library Science

Mathematical & Computational Biology

Medical Informatics

Multidisciplinary Sciences

Robotics

**UNO: Grafičko inženjerstvo i dizajn**

19. Art (AHCi)

54 Communication

60 Computer Science, Interdisciplinary Applications

80 Education, Scientific Disciplines

93 Engineering, Environmental

95 Engineering, Industrial

96 Engineering, Manufacturing

99 Engineering, Multidisciplinary

110 Film, Radio, Television (AHCi)

137 Imaging Science & Photographic Technology

141 Information Science & Library Science

150 Literary Reviews (AHCi)

166 Materials Science, Coatings & Films

168 Materials Science, Multidisciplinary

169 Materials Science, Paper & Wood

170 Materials Science, Textiles

188 Microscopy

191 Multidisciplinary Sciences

194 Nanoscience & Nanotechnology

205 Optics

217 Photographic Technology (current - Imaging Science & Photographic Technol.)

234 Polymer Science

261 Robotics

269 Spectroscopy

**PRILOG 2: Liste MNO resornog Ministarstva Srbije**

**UNO: Automatika i upravljanje sistemima**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

Industrijski softver i informatika

Mašinstvo

**UNO:Automatika i upravljanje sistemima - biomedicinski inženjering**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Automatika i upravljanje sistemima - geoinformatika**

Matematika, računarske nauke i mehanika

Elektronika, telekomunikacije i informacione tehnologije

Industrijski softver i informatika

**UNO: Teorije i interpretacije geometrijskog prostora u arhitekturi i urbanizmu**

Saobraćaj, urbanizam i građevinarstvo

**UNO: Mehanika deformabilnog tela (KatedraZamehaniku-054)**

Matematika i mehanika

Matematika, računarske nauke i mehanika

Mašinstvo

**UNO: Mehanika (KatedraZamehaniku-054)**

Matematika i mehanika

Matematika, računarske nauke i mehanika

Mašinstvo

**UNO: Biomehanika (KatedraZamehaniku-054)**

Matematika i mehanika

Biologija

**UNO: Računarska grafika**

Matematika, računarske nauke i mehanika

Elektronika, telekomunikacije i informacione tehnologije

Industrijski softver i informatika

**UNO: Električna merenja**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Logistika i intermodalni transport**

Saobraćaj, urbanizam i građevinarstvo

**UNO: Telekomunikacije i obrada signala**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Organizacija, tehnologija građenja i menadžment**

Materijali i hemijske tehnologije

Saobraćaj, urbanizam i građevinarstvo

**UNO: Zgradarstvo-građevinske i arhitektonske konstrukcije**

Saobraćaj, urbanizam i građevinarstvo

**UNO: Poštanski saobraćaj i komunikacije**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Građevinski materijali, procena stanja i sanacija konstrukcija**

Saobraćaj, urbanizam i građevinarstvo

Materijali i hemijske tehnologije

**UNO: Umetnost primenjena na arhitekturu, tehniku i dizajn**

Saobraćaj, urbanizam i građevinarstvo

**UNO: Elektronika**

Elektronika i telekomunikacije

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Geodezija i geoinformatika**

Geonauke i astronomija

Matematika, računarske nauke i mehanika

Elektronika, telekomunikacije i informacione tehnologije

**UNO: Planiranje, regulisanje i bezbednost saobraćaja**

Saobraćaj, urbanizam i građevinarstvo

**UNO: Kvalitet, efektivnost i logistika**

Energetska efikasnost

**UNO: Mehanika fluida**

Matematika i mehanika

Mašinstvo

**UNO: Hidropneumatska tehnika**

Mašinstvo

**UNO: Gasna i naftna tehnika**

Mašinstvo

**UNO: Primenjene računarske nauke i informatika**

Matematika, računarske nauke i mehanika

Elektronika, telekomunikacije i informacione tehnologije

Industrijski softver i informatika

**UNO: Grafičko inženjerstvo i dizajn**

Matematika, računarske nauke i mehanika