საბაკალავრო საგანმანათლებლო პროგრამა

**კომპიუტერული მეცნიერება**

თბილისი

2021 წელი

**სასწავლო გეგმა**

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| **#** | **სასწავლო კურსი / მოდული/ პრაქტიკა / კვლევითი კომპონენტი** | **სტატუსი** | **კრედიტების რაოდენობა** | **კრედიტების განაწილება სასწავლო****კურსებისა და სემესტრების მიხედვით** |  |  |  **საათების განაწილება** | **საკონტაქტო საათების რაოდენობა კვირაში** |
| **I ს.წ.** | **II ს.წ.** | **III ს.წ.** | **IV ს.წ.** | **საკონტაქტო** |  | **ჯამური საათები** |
| **I სემესტრი** | **II სემესტრი** | **III სემესტრი** | **IV სემესტრი** | **V სემესტრი** | **VI სემესტრი** | **VII სემესტრი** | **VIII სემესტრი** | **ლექცია/კონსულტაცია** | **სემინარი/ჯგუფური მუშაობა/****პრაქტიკული სამუშაო** | **შუალედური გამოცდ(ა/ები)** | **დასკვნითი გამოცდა** | **სულ საკონტაქტო** | **დამოუკიდებელი მუშაობის** |
| 2 | კალკულუსი 1 | სავალდებულო | 6 | 6 |  |  |  |  |  |  |  | 15 | 28 | 2 | 2 | 47 | 103 | 150 | 3 |
| 3 | კომპიუტერის არქიტექტურა | სავალდებულო | 5 | 5 |  |  |  |  |  |  |  | 43 | - | 2 | 2 | 47 | 78 | 125 | 3 |
| 4 | დაპროგრამების საფუძვლები | სავალდებულო | 5 | 5 |  |  |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 5 | კომპიუტერული მეცნიერებებისა და ტექნოლოგიების ასპექტები | სავალდებულო | 5 | 5 |  |  |  |  |  |  |  | 30 | 13 | 2 | 2 | 47 | 78 | 125 | 3 |
| 6 | ფიზიკა | სავალდებულო | 5 |  | 5 |  |  |  |  |  |  | 14 | 29 | 2 | 2 | 47 | 78 | 125 | 3 |
| 7 | კალკულუსი 2 | სავალდებულო | 6 |  | 6 |  |  |  |  |  |  | 15 | 28 | 2 | 2 | 47 | 103 | 150 | 3 |
| 8 | მონაცემთა ბაზები | სავალდებულო | 5 |  | 5 |  |  |  |  |  |  | 26 | 17 | 2 | 2 | 47 | 78 | 125 | 3 |
| 9 | ობიექტზე ორიენტირებული დაპროგრამება  | სავალდებულო | 5 |  | 5 |  |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 10 | წრფივი ალგებრა | სავალდებულო | 5 |  |  | 5 |  |  |  |  |  | 31 | 12 | 2 | 2 | 47 | 78 | 125 | 3 |
| 11 | ალგორითმები და მონაცემთა სტრუქტურები 1 | სავალდებულო | 6 |  |  | 6 |  |  |  |  |  | 29 | 14 | 2 | 2 | 47 | 103 | 150 | 3 |
| 12 | პროგრამული უზრუნველყოფის შექმნა | სავალდებულო | 5 |  |  | 5 |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 13 | დისკრეტული მათემატიკა | სავალდებულო | 6 |  |  |  | 6 |  |  |  |  | 29 | 14 | 2 | 2 | 47 | 103 | 150 | 3 |
| 14 | პროფესიული ინგლისური | სავალდებულო | 4 |  |  |  | 4 |  |  |  |  | 31 | 12 | 2 | 2 | 47 | 53 | 100 | 3 |
| 15 | ოპერაციული სისტემები | სავალდებულო | 5 |  |  |  | 5 |  |  |  |  | 15 | 28 | 2 | 2 | 47 | 78 | 125 | 3 |
| 16 | ალგორითმები და მონაცემთა სტრუქტურები 2 | სავალდებულო | 6 |  |  |  | 6 |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 103 | 150 | 3 |
| 17 | აკადემიური წერა | სავალდებულო | 5 |  |  |  |  | 5 |  |  |  | 15 | 28 | 2 | 2 | 47 | 78 | 125 | 3 |
| 18 | კომპიუტერული მეცნიერებების თეორიული საფუძვლები | სავალდებულო | 6 |  |  |  |  | 6 |  |  |  | 29 | 14 | 2 | 2 | 47 | 103 | 150 | 3 |
| 19 | ალბათობა და სტატისტიკა | სავალდებულო | 6 |  |  |  |  | 6 |  |  |  | 29 | 14 | 2 | 2 | 47 | 103 | 150 | 3 |
| 20 | კომპიუტერული ქსელები | სავალდებულო | 4 |  |  |  |  | 4 |  |  |  | 31 | 12 | 2 | 2 | 47 | 53 | 100 | 3 |
| 21 | პროგრამული უზრუნველყოფის ინჟინერია | სავალდებულო | 5 |  |  |  |  |  | 5 |  |  | 30 | 13 | 2 | 2 | 47 | 78 | 125 | 3 |
| 22 | ხელოვნური ინტელექტი | სავალდებულო | 5 |  |  |  |  |  | 5 |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 23 | კომპიუტერული სისტემების უსაფრთხოება | სავალდებულო | 5 |  |  |  |  |  | 5 |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 24 | მანქანური სწავლება | სავალდებულო | 6 |  |  |  |  |  |  | 6 |  | 29 | 14 | 2 | 2 | 47 | 103 | 150 | 3 |
| 25 | პროგრამირების პარადიგმები | სავალდებულო | 5 |  |  |  |  |  |  | 5 |  | 29 | 14 | 2 | 2 | 47 | 78 | 125 | 3 |
| 26 | სტაჟირება | სავალდებულო | 7 |  |  |  |  |  |  | 7 |  | - | 139 | 2 | 2 | 143 | 32 | 175 |  |
| 27 | სემინარი | სავალდებულო | 4 |  |  |  |  |  |  | 4 |  | 14 | - | 1 | - | 15 | 85 | 100 | 1 |
| 28 | საბაკალავრო ნაშრომი | სავალდებულო | 10 |  |  |  |  |  |  |  | 10 |  | 28 | 1 | 1 | 30 | 220 | 250 |  |
| 29 | კომპიუტერული უნარები | არჩევითი | 4 | 4 |  |  |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 30 | ვებ დაპროგრამება 1 | არჩევითი | 4 | 4 |  |  |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 31 | ვებ დაპროგრამება 2 | არჩევითი | 4 |  | 4 |  |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 32 | საინფორმაციო ტექნოლოგიების პროექტების მენეჯმენტი | არჩევითი | 4 |  | 4 |  |  |  |  |  |  | 14 | 29 | 2 | 2 | 47 | 53 | 100 | 3 |
| 33 | გეოგრაფიულ ინფორმაციული სისტემები | არჩევითი | 4 |  | 4 |  |  |  |  |  |  | 15 | 28 | 2 | 2 | 47 | 53 | 100 | 3 |
| 34 | ფრონტენდის პროგრამირება ანგულარის გამოყენებით  | არჩევითი | 4 |  |  | 4 |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 35 | სამგანზომილებიანი გრაფიკა Blender-ში 1 | არჩევითი | 4 |  |  | 4 |  |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 36 | მონაცემთა ბაზების ადმინისტრირება | არჩევითი | 4 |  |  | 4 |  |  |  |  |  | 14 | 29 | 2 | 2 | 47 | 53 | 100 | 3 |
| 37 | ბექენდის პროგრამირება | არჩევითი | 4 |  |  |  | 4 |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 38 | მობილური აპლიკაციების დაპროექტება და აგება | არჩევითი | 4 |  |  |  | 4 |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 39 | სამგანზომილებიანი გრაფიკა Blender-ში 2 | არჩევითი | 4 |  |  |  | 4 |  |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 40 | კომპიუტერული თამაშების დაპროგრამება | არჩევითი | 4 |  |  |  |  | 4 |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 41 | ვებ აპლიკაციების დაპროგრამება | არჩევითი | 4 |  |  |  |  | 4 |  |  |  | 28 | 15 | 2 | 2 | 47 | 53 | 100 | 3 |
| 42 | გამოყენებითი კრიპტოგრაფია | არჩევითი | 4 |  |  |  |  | 4 |  |  |  | 14 | 30 | 1 | 2 | 47 | 53 | 100 | 3 |
| 43 | დიფერენციალური განტოლებები | არჩევითი | 5 |  |  |  |  | 5 |  |  |  | 15 | 28 | 2 | 2 | 47 | 78 | 125 | 3 |
| 44 | ვირტუალიზაციის ტექნოლოგია | არჩევითი | 5 |  |  |  |  |  | 5 |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 45 | სტატისტიკური ბიოინფორმატიკა | არჩევითი | 5 |  |  |  |  |  | 5 |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 46 | ბუნებრივი ენის დამუშავება | არჩევითი | 5 |  |  |  |  |  | 5 |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 47 | პროგრამირება პითონზე | არჩევითი | 5 |  |  |  |  |  |  | 5 |  | 29 | 14 | 2 | 2 | 47 | 78 | 125 | 3 |
| 48 | ნეირონული ქსელების საფუძვლები | არჩევითი | 5 |  |  |  |  |  |  | 5 |  | 15 | 28 | 2 | 2 | 47 | 78 | 125 | 3 |
| 49 | ეთიკური ჰაკინგის და ქსელური უსაფრთხოების საფუძვლები | არჩევითი | 5 |  |  |  |  |  |  | 5 |  | 14 | 29 | 2 | 2 | 47 | 78 | 125 | 3 |
| 50 | პროგრამირება მათლაბზე | არჩევითი | 5 |  |  |  |  |  |  |  | 5 | 29 | 14 | 2 | 2 | 47 | 78 | 125 | 3 |
| 51 | უსადენო ტექნოლოგიები | არჩევითი | 5 |  |  |  |  |  |  |  | 5 | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
| 52 | ღრუბლოვანი გამოთვლები | არჩევითი | 5 |  |  |  |  |  |  |  | 5 | 32 | 11 | 2 | 2 | 47 | 78 | 125 | 3 |
| 53 | დაპროგრამება არდუინოს პლატფორმაზე | არჩევითი | 5 |  |  |  |  |  |  |  | 5 | 10 | 34 | 1 | 2 | 47 | 78 | 125 | 3 |
| 54 | კომპიუტერული ხედვა | არჩევითი | 5 |  |  |  |  |  |  |  | 5 | 29 | 14 | 2 | 2 | 47 | 78 | 125 | 3 |
| 55 | კომპიუტერის არქიტექტურის გაღრმავებული კურსი | არჩევითი | 5 |  |  |  |  | 5 |  |  |  | 28 | 15 | 2 | 2 | 47 | 78 | 125 | 3 |
|  | თავისუფალი კრედიტები(ინგლისური, რუსული, გერმანული, ფრანგული, ესპანური, თურქული) | არჩევითი | 43(15) | 55 | 55 | 65 | 5 | 4 | 5 | 3 | 10 | - | -- | - | - | - | - | 1075 | - |
| **სულ** |  | **240** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **919** | **768** | **73** | **73** | **1833** | **3092** | **6000** | **106** |

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