PLAN STUDIÓW: 2019/2020 ETN108; Studia **niestacjonarne pierwszego stopnia**
**Data zatwierdzenia: 28-06-2019**
Rodzaj studiów: Studia pierwszego stopnia
**Kierunek: Elektronika i Telekomunikacja**

| Lp | Nazwa przedmiotu | ECTS | Egz. | Ogólna liczba godzin | | | | | | Semestr 1 | | | | | Semestr 2 | | | | | Semestr 3 | | | | | Semestr 4 | | | | | Semestr 5 | | | | | Semestr 6 | | | | | Semestr 7 | | | | | Semestr 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Razem | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM |
| 1 | Prawa i obowiązki studenta | 0 | | **2** | 2 | 0 | 0 | 0 | 0 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | BHP | 0 | | **4** | 4 | 0 | 0 | 0 | 0 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Matematyka 2- Rach. prawdopod. | 5 | | **30** | 15 | 15 | 0 | 0 | 0 | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Fizyka | 6 | 1 | **45** | 30 | 0 | 15 | 0 | 0 | 30 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Informatyka | 6 | 1 | **45** | 25 | 0 | 20 | 0 | 0 | 25 | | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Matematyka 1- Analiza | 9 | 1 | **70** | 50 | 20 | 0 | 0 | 0 | 50 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Fizyka | 6 | 1 | **45** | 30 | 15 | 0 | 0 | 0 | | | | | | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Informatyka | 6 | 1 | **45** | 20 | 0 | 25 | 0 | 0 | | | | | | 20 | | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Matematyka 1- Analiza | 6 | 1 | **50** | 30 | 20 | 0 | 0 | 0 | | | | | | 30 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Elementy zarządzania | 1 | | **15** | 15 | 0 | 0 | 0 | 0 | | | | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Teoria obwodów | 7 | 1 | **60** | 30 | 30 | 0 | 0 | 0 | | | | | | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Technologie informacyjne | 2 | | **20** | 0 | 0 | 20 | 0 | 0 | | | | | | | | | | | | | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Przyrządy półprzewodnikowe | 6 | 1 | **50** | 20 | 15 | 15 | 0 | 0 | | | | | | | | | | | 20 | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Metrologia | 6 | 1 | **45** | 30 | 0 | 15 | 0 | 0 | | | | | | | | | | | 30 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Podstawy i algorytmy przetw.sygnałów | 8 | 1 | **75** | 30 | 30 | 15 | 0 | 0 | | | | | | | | | | | 30 | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Technika cyfrowa | 4 | 1 | **45** | 30 | 15 | 0 | 0 | 0 | | | | | | | | | | | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Technika cyfrowa | 4 | | **15** | 0 | 0 | 15 | 0 | 0 | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Podstawy CPS (Cyfrowe przetwarzanie sygnałów) | 6 | 1 | **40** | 20 | 0 | 20 | 0 | 0 | | | | | | | | | | | | | | | | 20 | | 20 | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Fale i anteny | 7 | 1 | **45** | 30 | 0 | 15 | 0 | 0 | | | | | | | | | | | | | | | | 30 | | 15 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Podstawy telekomunikacji | 7 | 1 | **45** | 30 | 15 | 0 | 0 | 0 | | | | | | | | | | | | | | | | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Język obcy | 2 | | **50** | 0 | 50 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | 50 | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Podstawy telekomunikacji | 2 | | **15** | 0 | 0 | 15 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | | | | | | | | | |
| 23 | Język obcy | 1 | | **15** | 0 | 15 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | | | | | | | | |
| 24 | Mikroprocesory i procesory sygnałowe | 5 | 1 | **40** | 20 | 0 | 20 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 20 | | 20 | | | | | | | | | | | | | | | | | |
| 25 | Informatyka II | 8 | 1 | **65** | 30 | 35 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 30 | 35 | | | | | | | | | | | | | | | | | | |
| 26 | Układy elektroniczne | 6 | 1 | **50** | 20 | 0 | 30 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 20 | | 30 | | | | | | | | | | | | | | | | | |
| 27 | Optotelekomunikacja | 4 | 1 | **20** | 20 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 20 | | | | | | | | | | | | | | | | | | | |
| 28 | Język obcy | 1 | | **15** | 0 | 15 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | | | | |
| 29 | Optotelekomunikacja | 2 | | **15** | 0 | 0 | 15 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | | | |
| 30 | **PO w/z systemów transmisji cyfrowej**<br>1.Cyfrowe systemy telekomunikacyjne<br>2.Modulacja cyfrowa i jej zastosowania | 2 | | **20** | 20 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 20 | | | | | | | | | | | | | | |
| 31 | **PO w/z systemów i sieci telekomunikacyjnych**<br>1. Urządzenia sieci telekomunikacyjnych<br>2. Struktury i działanie sieci telekomunikacyjnych | 6 | 1 | **50** | 20 | 0 | 30 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 20 | | 30 | | | | | | | | | | | | |
| 32 | **PO zastosowania komputerów**<br>1. Komputerowe systemy kontrolno-pomiarowe<br>2. Projektowanie systemów kontrolno-pomiarowych | 5 | 1 | **45** | 20 | 0 | 25 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 20 | | 25 | | | | | | | | | | | | |
| 33 | **PO w/z sieci zintegorwanych**<br>1. Sieci zintegrowane<br>2. Sygnalizacja i urządzenia sieci zintegrowanych | 4 | 1 | **30** | 20 | 0 | 10 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 20 | | 10 | | | | | | | | | | | | |
| 34 | Radiokomunikacja | 4 | 1 | **30** | 30 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | | | | | | | | | | | | | |
| 35 | Radiokomunikacja | 2 | | **10** | 0 | 10 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | |
| 36 | Język obcy | 4 | 1 | **40** | 0 | 40 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | | | | | | |
| 37 | **PO w/z syst. operacyjne /bazy danych**<br>1.Sieciowe systemy wbudowane<br>2.Systemy czasu rzeczywistego | 6 | 1 | **45** | 15 | 0 | 30 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 30 | | | | | | |

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| Lp | Nazwa przedmiotu | ECTS | Egz. | Ogólna liczba godzin | | | | | | Semestr 1 | | | | | Semestr 2 | | | | | Semestr 3 | | | | | Semestr 4 | | | | | Semestr 5 | | | | | Semestr 6 | | | | | Semestr 7 | | | | | Semestr 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Razem | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM | W | C | L | P | SM |
| 38 | **PO I**<br>1.Urządzenia sieci komputerowych<br>2.Programowanie aplikacji sieciowych w Javie i C# | 5 | 1 | **40** | 20 | 20 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 20 | | | | | | | | |
| 39 | PO Wybrane zagadnienia prawne | 4 | 1 | **30** | 15 | 15 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 15 | | | | | | | | |
| 40 | Eksploatacja systystemów ektronicznych i radiotelekomunikacyjnych | 5 | 1 | **35** | 20 | 15 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 15 | | | | | | | | |
| 41 | **PO w/z technik multimedialnych**<br>1. Wprowadzenie do multimediów<br>2. Obraz i dźwięk cyfrowy | 4 | 1 | **40** | 20 | 0 | 20 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | | 20 | | |
| 42 | **PO II**<br>1.Algorytmy sieciowe<br>2.Protokoły routingu | 4 | 1 | **40** | 20 | 20 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 20 | | | |
| 43 | Ochrona wasnosci intelektualnych | 0 | | **4** | 4 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 44 | **PO III**<br>1.Technologie sieci komputerowych<br>2.Techniczne aspekty projektowania sieci lokalnych i rozległych | 4 | 1 | **40** | 20 | 20 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 20 | | | |
| 45 | Seminarium dyplomowe | 16 | | **10** | 0 | 0 | 0 | 0 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| 46 | Oddanie pracy dyplomowej | 0 | | **0** | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| RAZEM: | | 208 | 30 | **1585** | 775 | 430 | 370 | 0 | 10 | 126 | 35 | 35 | 0 | 0 | 125 | 65 | 25 | 0 | 0 | 110 | 60 | 65 | 0 | 0 | 80 | 65 | 50 | 0 | 0 | 90 | 50 | 65 | 0 | 0 | 110 | 15 | 80 | 0 | 0 | 70 | 100 | 30 | 0 | 0 | 64 | 40 | 20 | 0 | 10 |
| | | | | Razem godzin/semestr: | | | | | | 196 | | | | | 215 | | | | | 235 | | | | | 195 | | | | | 205 | | | | | 205 | | | | | 200 | | | | | 134 | | | | |
| | | | | Razem egzaminów w semestrze: | | | | | | 3 | | | | | 4 | | | | | 4 | | | | | 3 | | | | | 4 | | | | | 4 | | | | | 5 | | | | | 3 | | | | |
| 47 | Praktyka | 2 | | **160** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAZEM: | | 210 | 30 | 1745 | 775 | 430 | 370 | 0 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |