**Profil praktyczny**
**Okres studiów 2020-2024**
**Studnia niestacjonarne**
**Kierunek: Metalurgia**

**W -** wykład
**C -** ćwiczenia
**L -** laboratorium
**P -** projekt

| Przedmioty w poszczególnych modułach | Cały cykl kształcenia | | | | | | I semestr | | | | | II semestr | | | | | III semestr | | | | | IV semestr | | | | | V semestr | | | | | VI semestr | | | | | VII semestr | | | | | Forma zaliczenia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L.godz. | ECTS | W | C | L | P | W | C | L | P | ects | W | C | L | P | ects | W | C | L | P | ects | W | C | L | P | ects | W | C | L | P | ects | W | C | L | P | ects | W | C | L | P | ects | |
| **Moduł ogólny** | 54 | 6 | 27 | 9 | 18 | 0 | 0 | 9 | 18 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 4 | |
| Przedmiot Humanistyczny | 9 | 1 | 9 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | 1 | Zo |
| Ochrona własności intelektualnej / Prawo w praktyce inżynierskiej | 9 | 2 | 9 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | 2 | Zo |
| Technologia informacyjna | 18 | 1 | 0 | 0 | 18 | 0 | | | 18 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Komunikacja i etyka w pracy zespołowej | 9 | 1 | 0 | 9 | 0 | 0 | | 9 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Ergonomia i bezpieczeństwo pracy | 9 | 1 | 9 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | 1 | Zo |
| **Moduł językowy** | 72 | 8 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 4 | 0 | 36 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | |
| Język angielski / Język niemiecki I, II | 72 | 8 | 0 | 72 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | 36 | | | 4 | | 36 | | | 4 | | | | | | EGZ |
| **Moduł podstawowy** | 225 | 39 | 81 | 90 | 54 | 0 | 36 | 45 | 18 | 0 | 17 | 36 | 27 | 36 | 0 | 18 | 9 | 18 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Analiza matematyczna | 27 | 5 | 9 | 18 | 0 | 0 | 9 | 18 | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Algebra liniowa | 27 | 5 | 9 | 18 | 0 | 0 | | | | | | 9 | 18 | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Zaawansowane metody matematyczne (matlab) | 27 | 4 | 9 | 18 | 0 | 0 | | | | | | | | | | | 9 | 18 | | | 4 | | | | | | | | | | | | | | | | | | | | Zo |
| Fizyka I | 27 | 6 | 9 | 18 | 0 | 0 | 9 | 18 | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Fizyka II | 18 | 3 | 9 | 0 | 9 | 0 | | | | | | 9 | | 9 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Chemia nieorganiczna | 45 | 6 | 18 | 9 | 18 | 0 | 18 | 9 | 18 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Chemia fizyczna z elementami termodynamiki | 27 | 5 | 9 | 0 | 18 | 0 | | | | | | 9 | | 18 | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Nowoczesne materiały w przemyśle | 27 | 5 | 9 | 9 | 9 | 0 | | | | | | 9 | 9 | 9 | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| **Moduł kierunkowy** | 378 | 61 | 144 | 90 | 108 | 36 | 18 | 27 | 0 | 9 | 11 | 27 | 9 | 18 | 18 | 12 | 63 | 36 | 54 | 9 | 26 | 0 | 0 | 0 | 0 | 0 | 18 | 9 | 27 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 18 | 9 | 9 | 0 | 4 | |
| Podstawy metalurgii | 27 | 6 | 9 | 9 | 0 | 9 | 9 | 9 | | 9 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Przetwórstwo metali | 27 | 5 | 9 | 18 | 0 | 0 | 9 | 18 | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | EGZ |
| Technolgie łączenia i spajania materiałów | 18 | 2 | 9 | 0 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | | 2 | EGZ |
| Urządzenia cieplne w technice | 27 | 3 | 9 | 0 | 18 | 0 | | | | | | | | | | | | | | | | | | | | | 9 | | 18 | | 3 | | | | | | | | | | Zo |
| Termodynamika | 27 | 4 | 9 | 18 | 0 | 0 | | | | | | | | | | | 9 | 18 | | | 4 | | | | | | | | | | | | | | | | | | | | EGZ |
| Zaawansowane metody badania materiałów | 18 | 3 | 9 | 0 | 0 | 9 | | | | | | 9 | | | 9 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Mechanika i wytrzymałość materiałów | 27 | 4 | 9 | 9 | 9 | 0 | | | | | | | | | | | 9 | 9 | 9 | | 4 | | | | | | | | | | | | | | | | | | | | EGZ |
| Grafika inzynierska | 27 | 5 | 9 | 9 | 0 | 9 | | | | | | 9 | 9 | | 9 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Elektrotechnika | 18 | 2 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | | 2 | Zo |
| Informatyka, podstawy sieci komputerowych i baz danych | 27 | 4 | 9 | 0 | 18 | 0 | | | | | | 9 | | 18 | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | Zo |
| Technologia CAD/CAM | 27 | 4 | 9 | 0 | 9 | 9 | | | | | | | | | | | 9 | | 9 | 9 | 4 | | | | | | | | | | | | | | | | | | | | Zo |
| Materiałoznawstwo | 27 | 5 | 18 | 0 | 9 | 0 | | | | | | | | | | | 18 | | 9 | | 5 | | | | | | | | | | | | | | | | | | | | EGZ |
| Procesy przeróbki plastycznej | 27 | 5 | 9 | 9 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | 9 | 9 | 9 | | 5 | | | | | | | | | | EGZ |
| Metalurgia metali | 27 | 4 | 9 | 0 | 18 | 0 | | | | | | | | | | | 9 | | 18 | | 4 | | | | | | | | | | | | | | | | | | | | EGZ |
| Ekstrakcja metali | 27 | 5 | 9 | 9 | 9 | 0 | | | | | | | | | | | 9 | 9 | 9 | | 5 | | | | | | | | | | | | | | | | | | | | EGZ |
| **Moduł edycji pracy dyplomowej** | 36 | 20 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 5 | 0 | 18 | 0 | 0 | 15 | |
| Seminarium dyplomowe | 36 | 20 | 0 | 36 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | | | 5 | | 18 | | | 15 | ZAL |
| **Moduł praktyk zawodowych** | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Praktyka zawodowa | 0 | 30 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | 30 | | | | | | | | | | | | | | | Zo |
| **Moduł specjalności: Zaawansowane Technologie Wytwarzania** | 243 | 46 | 81 | 72 | 36 | 54 | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* | 0 | 0 | 0 | 0 | *0* | 27 | 18 | 9 | 18 | *18* | 27 | 27 | 18 | 36 | *21* | 27 | 27 | 9 | 0 | *7* | |
| Rafinacja metali i stopów i żużli | 18 | 2 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | | 2 | EGZ |
| Odlewanie metali i stopów | 18 | 6 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | | 6 | | | | | | | | | | Zo |
| Recykling metali i stopów | 9 | 2 | 0 | 0 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 2 | EGZ |
| Podstawy technologii wytwarzania | 27 | 6 | 9 | 9 | 0 | 9 | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 9 | 6 | | | | | | | | | | EGZ |
| Konstrukcje inżynierskie | 36 | 5 | 9 | 18 | 0 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 18 | | 9 | 5 | | | | | EGZ |
| Podstawy konstrukcji maszyn | 27 | 6 | 9 | 0 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | 9 | 6 | | | | | | | | | | Zo |
| Projektowanie procesów technologicznych | 27 | 4 | 9 | 0 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | 9 | 4 | | | | | Zo |
| Opracowanie wyników pomiarów i staystyka dla inzynierów | 9 | 3 | 0 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | 3 | | | | | EGZ |
| Metala współtowarzyszące w ciągach technologicznych | 18 | 2 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 2 | EGZ |
| Metalurgia proszków / Materiały typu SMART | 18 | 1 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 1 | Zo |
| Inżynieria systemów i bazy danych | 18 | 4 | 9 | 0 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | | 4 | | | | | EGZ |
| Projekt technologiczny | 18 | 5 | 0 | 0 | 0 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 5 | | | | | Zo |
| **OGÓŁEM ZAAWANSOWANE TECHNOLOGIE WYTWARZANIA** | 1008 | 210 | 333 | 369 | 216 | 90 | 54 | 81 | 36 | 9 | *30* | 63 | 36 | 54 | 18 | *30* | 72 | 54 | 54 | 9 | *30* | 0 | 0 | 0 | 0 | *30* | 45 | 63 | 36 | 18 | *30* | 27 | 81 | 18 | 36 | *30* | 72 | 54 | 18 | 0 | *30* | |
| **Moduł specjalności: Inżynieria Produkcji i Zarządzanie** | 243 | 46 | 81 | 72 | 36 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 18 | 9 | 18 | 18 | 27 | 27 | 18 | 36 | 21 | 27 | 27 | 9 | 0 | 7 | |
| Podstawy zarządzania | 18 | 5 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | | 5 | | | | | Zo |
| Współczesne systemy zarządzania i ogranizacji produkcji | 18 | 2 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 2 | EGZ |
| Systemy zapewniania jakości | 27 | 6 | 9 | 0 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | 9 | 6 | | | | | | | | | | EGZ |
| Finanse i rachunkowość | 18 | 6 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | | 6 | | | | | | | | | | EGZ |
| Logistyka w przedsiębiorstwie / systemy logistyczne | 27 | 6 | 9 | 9 | 0 | 9 | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 9 | 6 | | | | | | | | | | EGZ |
| Rachunek kosztów dla inżynierów/ Analiza kosztów w procesie decyzyjnym | 36 | 5 | 0 | 18 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 9 | 9 | 5 | | | | | Zo |
| Optymalizowanie procesów produkcyjnych | 27 | 5 | 9 | 0 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | 9 | 5 | | | | | EGZ |
| Zarządanie zasobami ludzkimi | 18 | 2 | 9 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 9 | | 2 | EGZ |
| Projekt technologiczny | 18 | 5 | 0 | 0 | 0 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 5 | | | | | Zo |
| Zarządzanie ochroną środowiska / Utylizacja i recykling odpadów | 9 | 1 | 0 | 9 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 1 | Zo |
| Zarządzanie niezawodnością systemów technicznych | 18 | 2 | 9 | 0 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | 9 | 2 | Zo |
| Prawo gospodarcze/ Prawne aspekty funkcjonowania przedsiębiorstw | 9 | 1 | 9 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | 1 | | | | | Zo |
| **OGÓŁEM INŻYNIERIA PRODUKCJI I ZARZĄDZANIE** | 1008 | 210 | 333 | 369 | 216 | 90 | 54 | 81 | 36 | 9 | *30* | 63 | 36 | 54 | 18 | *30* | 72 | 54 | 54 | 9 | *30* | 0 | 0 | 0 | 0 | *30* | 45 | 63 | 36 | 18 | *30* | 27 | 81 | 18 | 36 | *30* | 72 | 54 | 18 | 0 | *30* | |