

| <b>Sem: 01</b>           |      |             |                  |                      |                                 |      |     |     |     |     |     |     |     |      |
|--------------------------|------|-------------|------------------|----------------------|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|
| <b>LK000-S1-ISA-1130</b> |      |             |                  |                      |                                 |      |     |     |     |     |     |     |     |      |
| Lp                       | Blok | Status      | Moduł wybieralny | Kod                  | Nazwa                           | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
| 1                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1003  | Computer Science 1              | 5    | 30  |     |     | 30  |     |     |     | 60   |
| 2                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1007  | Materials 1                     | 2    | 30  |     |     |     |     |     |     | 30   |
| 3                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1001  | Algebra and Geometry            | 4    |     |     | 45  |     |     |     |     | 45   |
| 4                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1002  | Calculus 1                      | 7    | 30  |     | 45  |     |     |     |     | 75   |
| 5                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1005  | Engineering Physics             | 3    | 15  |     | 30  |     |     |     |     | 45   |
| 6                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1008  | Mechanics 1                     | 3    | 15  |     | 15  |     |     |     |     | 30   |
| 7                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-1004  | Engineering Graphics            | 2    | 15  | 15  |     |     |     |     |     | 30   |
| 8                        | nd   | Obowiązkowy |                  | 1130-ISA-LIBRARY     | Library Training                | 0    | 2   |     |     |     |     |     |     | 2    |
| 9                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-WF001 | Physical Education and Sports 1 | 0    |     |     | 30  |     |     |     |     | 30   |
| 10                       | nd   | Obowiązkowy |                  | 1130-00000-ISA-SAFE  | Health and Safety Training      | 0    | 4   |     |     |     |     |     |     | 4    |
| 11                       | nd   | Obowiązkowy |                  | 1130-00000-ISA-JO001 | Foreign language 1              | 2    |     |     | 30  |     |     |     |     | 30   |
| 12                       | nd   | Obowiązkowy |                  | 1130-00000-ISA-JO002 | Foreign language 2              | 2    |     |     | 30  |     |     |     |     | 30   |
|                          |      |             |                  |                      | SUMA                            | 30   | 141 | 15  | 225 | 30  |     |     |     | 411  |

| <b>Sem: 02</b>           |      |             |                  |                      |                                 |      |     |     |     |     |     |     |     |      |
|--------------------------|------|-------------|------------------|----------------------|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|
| <b>LK000-S2-ISA-1130</b> |      |             |                  |                      |                                 |      |     |     |     |     |     |     |     |      |
| Lp                       | Blok | Status      | Moduł wybieralny | Kod                  | Nazwa                           | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
| 1                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2004  | Electric Circuits 1             | 3    | 30  |     | 15  |     |     |     |     | 45   |
| 2                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2005  | Engineering Graphics - CAD 1    | 2    |     | 30  |     |     |     |     |     | 30   |
| 3                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2002  | Computer Science 2              | 2    | 15  |     |     | 15  |     |     |     | 30   |
| 4                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2006  | Mechanics 2                     | 5    | 30  |     | 30  |     |     |     |     | 60   |
| 5                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2001  | Calculus 2                      | 5    | 30  |     | 30  |     |     |     |     | 60   |
| 6                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2007  | Mechanics of Structures 1       | 4    | 30  |     | 15  |     |     |     |     | 45   |
| 7                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-2008  | Thermodynamics 1                | 5    | 30  |     | 30  |     |     |     |     | 60   |
| 8                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-WF002 | Physical Education and Sports 2 | 0    |     |     | 30  |     |     |     |     | 30   |
| 9                        | nd   | Obowiązkowy |                  | 1130-00000-ISA-JO003 | Foreign language 3              | 2    |     |     | 30  |     |     |     |     | 30   |
| 10                       | nd   | Obowiązkowy |                  | 1130-00000-ISA-JO004 | Foreign language 4              | 2    |     |     | 30  |     |     |     |     | 30   |
|                          |      |             |                  |                      | SUMA                            | 30   | 165 | 30  | 210 | 15  |     |     |     | 420  |

| <b>Sem: 03</b>           |      |        |                  |     |       |      |     |     |     |     |     |     |     |      |
|--------------------------|------|--------|------------------|-----|-------|------|-----|-----|-----|-----|-----|-----|-----|------|
| <b>LK000-S3-ISA-1130</b> |      |        |                  |     |       |      |     |     |     |     |     |     |     |      |
| Lp                       | Blok | Status | Moduł wybieralny | Kod | Nazwa | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |

|    |    |             |  |                      |                                    |    |     |    |     |  |  |  |  |   |     |
|----|----|-------------|--|----------------------|------------------------------------|----|-----|----|-----|--|--|--|--|---|-----|
| 1  | nd | Obowiązkowy |  | 1130-AERO0-ISA-3005  | Engineering Graphics - CAD 2       | 2  |     | 30 |     |  |  |  |  |   | 30  |
| 2  | nd | Obowiązkowy |  | 1130-AERO0-ISA-3010  | Manufacturing Technology 1         | 2  | 30  |    |     |  |  |  |  |   | 30  |
| 3  | nd | Obowiązkowy |  | 1130-AERO0-ISA-3008  | Introduction to Aerospace          | 2  | 15  | 15 |     |  |  |  |  |   | 30  |
| 4  | nd | Obowiązkowy |  | 1130-00000-ISA-3003  | Calculus 3                         | 3  | 15  |    | 30  |  |  |  |  |   | 45  |
| 5  | nd | Obowiązkowy |  | 1130-00000-ISA-3006  | Fluid Mechanics 1                  | 4  | 30  |    | 15  |  |  |  |  |   | 45  |
| 6  | nd | Obowiązkowy |  | 1130-00000-ISA-3009  | Machine Design 1                   | 3  | 15  |    | 15  |  |  |  |  |   | 30  |
| 7  | nd | Obowiązkowy |  | 1130-00000-ISA-3002  | Basics of Automation and Control 1 | 4  | 30  |    | 15  |  |  |  |  |   | 45  |
| 8  | nd | Obowiązkowy |  | 1130-00000-ISA-WF003 | Physical Education and Sports 3    | 0  |     |    | 30  |  |  |  |  |   | 30  |
| 9  | nd | Obowiązkowy |  | 1130-AERO0-ISA-3012  | Mechanics of Structures 2          | 2  | 15  |    | 15  |  |  |  |  |   | 30  |
| 10 | nd | Obowiązkowy |  | 1130-00000-ISA-JOC15 | Foreign language 5                 | 2  |     |    | 30  |  |  |  |  |   | 30  |
| 11 | nd | Obowiązkowy |  | 1130-00000-ISA-JOC16 | Foreign language 6                 | 2  |     |    | 30  |  |  |  |  |   | 30  |
| 12 | nd | Obowiązkowy |  | 1130-AERO0-ISA-3001  | Aeronautical Systems 1             | 2  | 30  |    |     |  |  |  |  |   | 30  |
| 13 | nd | Obowiązkowy |  | 1130-AERO0-ISA-3011  | Materials in Aerospace Technology  | 2  | 30  |    |     |  |  |  |  |   | 30  |
| 14 | nd | Obowiązkowy |  | 1130-00000-ISA-C1-GB | English - examination: level C1    | 0  |     |    |     |  |  |  |  | 0 | 0   |
|    |    |             |  |                      | SUMA                               | 30 | 210 | 45 | 180 |  |  |  |  | 0 | 435 |

**Sem: 04****LK000-S4-ISA-1130**

| Lp | Blok | Status      | Moduł wybieralny | Kod                 | Nazwa                      | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
|----|------|-------------|------------------|---------------------|----------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 1  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4013 | Integrated Laboratory      | 3    |     |     |     | 30  |     |     |     | 30   |
| 2  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4015 | Manufacturing Technology 2 | 2    |     |     |     | 30  |     |     |     | 30   |
| 3  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4007 | Electronics 2              | 1    |     |     |     | 15  |     |     |     | 15   |
| 4  | nd   | Obowiązkowy |                  | 1130-00000-ISA-4006 | Electronics 1              | 2    | 15  |     | 15  |     |     |     |     | 30   |
| 5  | nd   | Obowiązkowy |                  | 1130-00000-ISA-4014 | Machine Design 2           | 3    | 15  |     | 15  |     |     |     |     | 30   |
| 6  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4017 | Mechanics of Flight 1      | 3    | 15  | 15  |     |     |     |     |     | 30   |
| 7  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4001 | Aerodynamics 1             | 3    | 30  |     |     |     |     |     |     | 30   |
| 8  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4002 | Astronautics               | 2    | 30  |     |     |     |     |     |     | 30   |
| 9  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4018 | Propulsion Systems 1       | 4    | 30  |     | 15  |     |     |     |     | 45   |
| 10 | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6007 | Finite Element Method 1    | 4    | 30  |     |     | 15  |     |     |     | 45   |
| 11 | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5001 | Aeronautical Systems 2     | 3    | 15  |     |     | 15  |     |     |     | 30   |
|    |      |             |                  |                     | SUMA                       | 30   | 180 | 15  | 45  | 105 |     |     |     | 345  |

**Sem: 05**

| Lp | Blok | Status | Moduł wybieralny | Kod | Nazwa | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
|----|------|--------|------------------|-----|-------|------|-----|-----|-----|-----|-----|-----|-----|------|
|----|------|--------|------------------|-----|-------|------|-----|-----|-----|-----|-----|-----|-----|------|

|                                    |      |             |                  |                      | SUMA                                 | 30   | 225 | 30  | 60  | 45  |     |     |     |      | 360 |
|------------------------------------|------|-------------|------------------|----------------------|--------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|-----|
| <b>Sem: 05</b>                     |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| <b>LKAPS-S5-ISA-1130</b>           |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| <b>Napędy Lotnicze i Kosmiczne</b> |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| Lp                                 | Blok | Status      | Moduł wybieralny | Kod                  | Nazwa                                | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |     |
| 1                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-7003  | Computational Fluid Dynamics         | 4    | 30  |     |     | 15  |     |     |     | 45   |     |
| 2                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5002  | Aircraft Design 1                    | 4    | 30  | 15  |     |     |     |     |     | 45   |     |
| 3                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5012  | Machine Design 3                     | 3    | 15  |     | 15  |     |     |     |     | 30   |     |
| 4                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5014  | Mechanics of Flight 2                | 3    | 15  | 15  |     |     |     |     |     | 30   |     |
| 5                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5015  | Risk and Reliability in Aviation     | 2    | 15  |     | 15  |     |     |     |     | 30   |     |
| 6                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-7001  | Aeronautical Regulations             | 1    | 15  |     |     |     |     |     |     | 15   |     |
| 7                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5003  | Aircraft Engine Design 1             | 3    | 30  |     |     |     |     |     |     | 30   |     |
| 8                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5004  | Chemistry of Combustion              | 3    | 15  |     | 15  |     |     |     |     | 30   |     |
| 9                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-5018  | Spacecraft Design                    | 1    | 15  |     |     |     |     |     |     | 15   |     |
| 10                                 | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-4012  | Integrated CAD/CAM/CAE Systems       | 2    |     |     |     | 30  |     |     |     | 30   |     |
| 11                                 | nd   | Obowiązkowy |                  | 1130-AEAPS-ISA-5019  | Propulsion Systems 2                 | 4    | 45  |     | 15  |     |     |     |     | 60   |     |
| <b>Sem: 06</b>                     |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| Lp                                 | Blok | Status      | Moduł wybieralny | Kod                  | Nazwa                                | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |     |
|                                    |      |             |                  |                      | SUMA                                 | 34   | 135 | 225 | 15  | 15  |     | 120 |     | 510  |     |
| <b>Sem: 06</b>                     |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| <b>LKAPS-S6-ISA-1130</b>           |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| <b>Napędy Lotnicze i Kosmiczne</b> |      |             |                  |                      |                                      |      |     |     |     |     |     |     |     |      |     |
| Lp                                 | Blok | Status      | Moduł wybieralny | Kod                  | Nazwa                                | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |     |
| 1                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6002  | Aircraft Design 2                    | 4    | 15  | 30  |     |     |     |     |     | 45   |     |
| 2                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6004  | Aircraft Maintenance                 | 2    | 30  |     |     |     |     |     |     | 30   |     |
| 3                                  | nd   | Obowiązkowy |                  | 1130-ISA-PP          | Intermediate Engineering Project     | 6    |     | 60  |     |     |     |     |     | 60   |     |
| 4                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6009  | Machine Design 6                     | 2    |     | 30  |     |     |     |     |     | 30   |     |
| 5                                  | nd   | Obowiązkowy |                  | 1130-00000-ISA-6010  | Physics 1                            | 2    | 30  |     |     |     |     |     |     | 30   |     |
| 6                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6014  | Structure and Assembling of Airframe | 2    | 15  | 15  |     |     |     |     |     | 30   |     |
| 7                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-6003  | Aircraft Engine Design 2             | 3    |     | 30  |     |     |     |     |     | 30   |     |
| 8                                  | nd   | Obowiązkowy |                  | 1130-AERO0-ISA-7002  | Aircraft Engines Maintenance         | 2    | 30  |     |     |     |     |     |     | 30   |     |
| 9                                  | nd   | Obowiązkowy |                  | 1130-00000-ISA-PRAKT | Diploma Practical                    | 4    |     |     |     |     |     | 120 |     | 120  |     |
| 10                                 | nd   | Obowiązkowy |                  | 1130-AEAPS-ISA-6015  | Combustion Laboratory                | 1    |     |     |     | 15  |     |     |     | 15   |     |
| 11                                 | nd   | Obowiązkowy |                  | 1130-AEAPS-ISA-6016  | Computer Modeling of Combustion      | 2    | 15  |     | 15  |     |     |     |     | 30   |     |

|  |  |            |   |  |             |   |  |  |  |  |  |  |  |  |  |    |
|--|--|------------|---|--|-------------|---|--|--|--|--|--|--|--|--|--|----|
|  |  | Wybieralny | dowolne ECTS i suma l.godz<br>Przedmiot obieralny - wybór z oferty przedmiotów obieralnych dla kierunku/specjalności za minimum 4ECTS. Aktualna oferta przedmiotów obieralnych publikowana jest na stronie wydziałowej przed rozpoczęciem semestru. |  | RAZEM MODUŁ | 4 |  |  |  |  |  |  |  |  |  | 60 |
|--|--|------------|---|--|-------------|---|--|--|--|--|--|--|--|--|--|----|

**Sem: 07**

| Lp | Blok | Status | Moduł wybieralny | Kod | Nazwa | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
|----|------|--------|------------------|-----|-------|------|-----|-----|-----|-----|-----|-----|-----|------|
|    |      |        |                  |     | SUMA  | 30   | 105 | 180 | 75  |     | 30  |     |     | 390  |

**Sem: 07**

**LKAPS-S7-ISA-1130**

**Napędy Lotnicze i Kosmiczne**

| Lp | Blok | Status      | Moduł wybieralny  | Kod                 | Nazwa                         | Ects | WYK | PRO | CWI | LAB | SED | PRA | LEK | Suma |
|----|------|-------------|---|---------------------|-------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 1  | nd   | Obowiązkowy |   | 1130-00000-ISA-1006 | Environment Protection        | 2    | 30  |     |     |     |     |     |     | 30   |
| 2  | nd   | Obowiązkowy |   | 1130-AERO0-ISA-7011 | Vibrations and Aeroelasticity | 3    | 15  |     | 15  |     |     |     |     | 30   |
| 3  | nd   | Obowiązkowy |   | 1130-ISA-SEMD       | Engineering Diploma Seminar   | 2    |     |     |     |     | 30  |     |     | 30   |
| 4  | nd   | Obowiązkowy |   | 1130-ISA-PDYPL      | Engineering Diploma Thesis    | 15   |     | 180 |     |     |     |     |     | 180  |
|    |      | Wybieralny  | 4ECTS i 60H<br>HES - przedmiot wybieralny - dwa z oferowanych   |                     | RAZEM MODUŁ                   | 4    |     |     |     |     |     |     |     | 60   |
|    |      | Wybieralny  | dowolne ECTS i suma l.godz<br>Przedmiot obieralny - wybór z oferty przedmiotów obieralnych dla kierunku/specjalności za minimum 4ECTS. Aktualna oferta przedmiotów obieralnych publikowana jest na stronie wydziałowej przed rozpoczęciem semestru. |                     | RAZEM MODUŁ                   | 4    |     |     |     |     |     |     |     | 60   |

**RAZEM**

| Lp | Blok | Status | Moduł wybieralny | Kod | Nazwa | Ects | WYK  | PRO | CWI | LAB | SED | PRA | LEK | Suma |
|----|------|--------|------------------|-----|-------|------|------|-----|-----|-----|-----|-----|-----|------|
|    |      |        |                  |     | SUMA  | 214  | 1161 | 540 | 810 | 210 | 30  | 120 | 0   | 2871 |