Sisteme de conducere a zborului II	Flight control systems II

Obiectiv principal	Course Objective
Disciplina contribuie la formarea viitorilor ingineri de profil aerospatial, având drept obiectiv prezenta studentilor principiile de functionare, scheme electrice si electronice de detaliu, lanturi de comenzi, legi de comanda si constructia diferitelor structuri de piloti automati pentru aparate de zbor subsonice si supersonice.	The discipline contributes to the training of future aerospace engineers, having as objective the presence of students operating principles, detailed electrical and electronic diagrams, control chains, command laws and construction of various autopilot structures for subsonic and supersonic aircraft.

Curs 2 ore pe săptămână, total 28 ore	Course 2 hoursweekly, total 28 hours
• ***Piloti automati pentru aeronave supersonice cu geometrie variabila*** (Scheme de principiu; Legi de comanda automata; Lanturi de comenzi; Regimul de stabilizare; Regimul de readucere la orizontala; Dirijarea de la sol; Autodirijarea; Intoarcerea la aterizare si manevre premergatoare aterizarii; Corectia rapoartelor de transmisie in functie de regimurile de zbor etc.) • ***Piloti automati pentru aeronave supersonice de tip AP*** (Scheme de principiu; Legi de comanda automata; Casete de comanda; Amplificatoare hidraulice si sisteme de pozitionare; Blocuri electronice de tip RKB; Traductoare de incidenta si derapaj; Traductoare de viteza, de altitudine si de suprasarcina; Echipamente si sisteme pentru reglarea eficientei aerodinamice; Sisteme de readucere la orizontala etc.) • ***Piloti automati pentru aeronave subsonice de tip IAR*** (Scheme de principiu; Legi de comanda automata; Lanturi de comenzi si sisteme Booster; Traductoare de incidenta si derapaj; Centrale aerodinamice; Centrale de cap si de verticala; Reglarea eficientei aerodinamice a comenzii longitudinale; Sisteme de comanda automata a miscarii de ruliu; Sisteme de comanda automata a miscarii de tangaj; Sisteme de comanda automata a directiei de zbor)	• ***Variable geometry supersonic aircraft autopilots*** (Schematic diagrams; Automatic control laws; Control chains; Stabilization mode; Horizontal return mode; Ground steering; Self-steering; Return to landing and pre-landing maneuvers; Correction of landing reports transmission depending on flight regimes, etc.) • ***AP pilots for supersonic aircraft*** (Schematic diagrams; Automatic control laws; Control boxes; Hydraulic amplifiers and positioning systems; RKB type electronic blocks; Incident and skid transducers; Speed, altitude and overload transducers ; Equipment and systems for regulating aerodynamic efficiency; Horizontal return systems, etc.) • ***Autopilots for IAR subsonic aircraft*** (Schematic diagrams; Automatic control laws; Control chains and Booster systems; Incident and skid transducers; Aerodynamic control units; Head and vertical control units; Adjusting the aerodynamic efficiency of the longitudinal control; Systems automatic control of the movement of the roll; systems of the automatic control of the pitch movement; systems of the automatic control of the flight direction)

Laborator 2 ore pe săptămână, total 28 ore	Laboratory 2 hour weekly, total 28 hours
• Sisteme de coordonare. • Sisteme de reglare automata de tip RKB. • Sisteme de pozitionare cu casete de comanda. • Boostere. • Sisteme de autostabilizare. • Centrale aerodinamice. • Traductoare de incidenta si derapaj. • Echipamente de corectie in raport cu altitudinea si suprasarcinile. • Sisteme de readucere la orizontala. • Sisteme de reglare a eficientei aerodinamice a comenzii longitudinale. • Piloti automati pentru rachete	• Coordination systems. • RKB type automatic adjustment systems. • Positioning systems with control boxes. • Boosters. • Self-stabilization systems. • Aerodynamic power plants. • Incidence and skid transducers. • Correction equipment in relation to altitude and overloads. • Horizontal return systems. • Aerodynamic efficiency adjustment systems of the longitudinal control. • Autopilots for missiles