

Theory of Machines and Automatic Control - project class

The Faculty of Automotive and Construction Machinery Engineering

Winter 2017/2018

teacher: Sebastian Korczak, PhD, Eng.

<http://myinventions.pl/lectures/>

(Wednesdays, 9:15-11:00, room 3.8)

date	topics	assessment
8.11.2017	Introduction. 1st project topics distribution. Velocities and accelerations in planar mechanisms.	---
15.11.2017	---	---
22.11.2017	Analytical methods for determining velocities and accelerations.	1st project consultations.
29.11.2017	Catch up on lecture (lecture 9, instead of 24.10.2017)	
6.12.2017	1st project commitment. 2nd project topics distribution. Machine dynamics.	1st project evaluation.
13.12.2017	Machine equation of motion.	2nd project consultations.
20.12.2017	---	---
3.01.2108	2nd project commitment. 3rd project topics distribution. Characteristics of basic automatic control elements. Block diagram algebra.	2nd project evaluation.
10.01.2018	PID control.	3rd project consultations.
17.01.2018	Stability criteria.	3rd project consultations.
24.01.2018	3th project commitment.	3rd project evaluation. Final evaluation.

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Class regulations

During the course students perform three individual projects according to class schedule. Commitment of project at certain date cause extra points. To pass the class all projects must be accepted by teacher and total number of 13 points must be achieved.

Class scoring:

- 1st project: 0-5pts
- 2nd project: 0-5pts
- 3rd project: 0-10pts
- extra points for systematic work: 0-5pts

Final mark evaluation based on total number of points:

2,0 (unsatisfactory): <13,0

3,0: 13,0-15,0

3,5: 15,5-17,5

4,0: 18,0-20,0

4,5: 20,5-22,5

5,0: 23,0-25,0

Project topics

1. Kinematics of mechanisms.
2. Machine dynamics.
3. Control systems' characteristics. Block diagram algebra. PID control. Stability analysis.