Name subjects :		*TECHNICAL PHYSICS I*		
Code subjects	***Case status***	***Semester***	***Number of ECTS credits***	***Number of lessons (weekly)***
PO1TF1	**Required**	**And**	**6**	**2P+2V**

Studio programs for organized by : Polytechnic , general studies

Conditionality other Subjects : None .

Idea studies subjects : Idea studies subjects is that students through analytical access meet with basic principles statics construction , as and to students bring closer understanding basic concepts , such as balance , external loads and internal force which they act in structures . Special attention is dedicated to analyzing line and latticed carrier , defining their characteristics in context static analysis . Through theoretical basics and applicative examples , students develop skills analytical thoughts , what them allows them to connect theory with practical aspects engineering practices . In that way way , subject provides insight into reality principles statics construction and preparation students for further development in engineering disciplines .

***Goals studies subjects* :** Goal The subject is that, through analytical approach , get to know students with basic elements statics certain line and latticed carrier ; to define external burden and internal forces and yes, through presentation applicative example , approximate student reality principles statics construction . Also , the goal is that students develop ability analytical thoughts and applications acquired knowledge in solving problems engineering problems from areas theories construction .

Outcomes learning :

A student who successfully overcome this one subject , will be able to :

1. Understands and analyzes basic principles statics construction , including balance force and moments , with by application on line and lattice carriers ;
2. Recognize external loads and order internal forces in statics systems and correctly them apply in analysis construction ;
3. Apply mathematical and analytical methods for solving problems statics and dimensioning construction ;
4. By applying methods force order and draft diagrams cross-sectional force basic static certain line carrier .

Name and last name teacher and Associate : Prof. Dr. Athanasius Kočov , mr. Bojana Sternisa Stanisic

Method teaching and overcoming materials : lectures , exercises , tests .

WORK PLAN

Sunday :		*Name methodological unit for lectures (L), exercises (V) and others teaching contents (O); Planned shape checks knowledge (Pz)*
Preparatory Sunday		Introduction , preparation and enrollment semester .
And Sunday	***P/V***	Basic principles modeling constructions and modeling Newtons laws .
II	***P/V***	Force as a load model . Vector algebra.
III	***P/V***	Force as vectorial size . Vector algebra.
IV	***P/V***	Active and reactive forces .
V	***P/V***	Balance rigid bodies .
VI	***P/V***	Moment of force .
VII	***P/V***	System force and moments . Reactions supports .
VIII	***P/V***	Concept latticed carrier .
IX	***PZ***	**Colloquium**
X	***P/V***	Solving grilles by method nodes .
XI	***P/V***	Solving grilles by method cross section .
XII	***P/V***	Beams carriers .
XIII	***P/V***	Internal forces in beams carriers .
XIV	***P/V***	Equations and diagrams .
XV	***P/V***	Recapitulation materials .
XVI	***PZ***	**Final exam .**
XVII		*Verification semester and enrollment rating*
XVIII		***Correctional exam deadline***

Obligations student in progress classes : lectures , exercises , tests .

Consultations by e- mail : YES

Load student

Sunday : 6 credits x 40/30 = 8 hours **Structure :** 2 hours lectures 2 hours exercises 4 hours independent work , including and consultations .	**In the semester :** Total burden for subject 6x30 = 180h Structure : Teaching and final exam : 8 hours x 16 weeks = 128 hours Necessary preparations before beginning semester (administration , enrollment , certification): 8hx2=16h Supplementary work for preparation and laying remedial exam time : 0-36h

Literature :

R. Hibbeler , Engineering Mechanics Statics, 12th edition (chapters 1, 2, 3, 4, 5, 6, 7);

Beer and Johnston, Vector Mechanics for Engineers, Statics, 8th edition (suppl material).

Shapes checks knowledge and evaluation :

Tests 20%, midterm exam 40% and exam 40%.

Rating	***A***	***B***	***C***	***D***	***E***
Number point	***90-100***	***80-89***	***70-79***	***60-69***	***50-59***