Course code Type and description	Pookaround Cou	100						
	Background Course							
ECTS credit	2 O secondaria e a la companya de la c							
Course name	Computational methods in non-linear solid mechanics							
Course name in Polish	Podstawy metod obliczeniowych nieliniowej mechaniki ciała stałego							
Language of instruction	English							
Course level	8 PRK							
Course coordinator	Z. Więckowski							
Course instructors								
Delivery methods and course duration		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester
	Contact hours	15					0	15
	E-learning	Yes	No	No	No	No	No	
	Assessment criteria (weightage)	1,00					0,00	
Course objective	To present curre	nt knowled	ge on compu	itational metho	ds of non-li	near solid me	echanics.	
Learning outcomes	To present current knowledge on computational methods of non-linear solid mechanics. After completing the course, a student will be able to:							
Assessment methods	1. recognize and 2. understand th 3. understand th U3). W1, W4, U3 – ex	e basic itera e computat	ative procedu	ures of solving	non-linear	problems (W	1 W4, U3)	
	The final evaluat Exam - 100%	ion is base	d on:					
Prerequisites								
Course content with delivery methods	LECTURE: Variational formulation of non-linear solid mechanics problems: geometrical non-linearities, physical non-linearities: e.g. plasticity and frictional contact problems.							
						geometrical	non-linea	rities, physical
	non-linearities: e	.g. plasticit	y and friction	al contact prot	lems.	geometrical	non-linea	rities, physical
	non-linearities: e Basic and advar	.g. plasticit	y and friction lures of solvi	al contact prot ng non-linear p	olems. problems.	0	non-linea	rities, physical
Basic reference materials	non-linearities: e Basic and advar Application of the 1. O. C. Zienkies edition, 2000.	e.g. plasticity aced proced <u>e finite elem</u> wicz and R.	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti	al contact prot ng non-linear r to non-linear e he Finite Elem	olems. problems. engineering ent Method	problems , volume I, N	lcGraw-Hi	II, London, 5th
Basic reference materials	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev	e.g. plasticity aced proced <u>e finite elem</u> wicz and R.	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti	al contact prot ng non-linear r to non-linear e he Finite Elem	olems. problems. engineering ent Method	problems , volume I, N	lcGraw-Hi	II, London, 5th
Basic reference materials	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000.	e.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R.	y and friction lures of solvi <u>hent method</u> L. Taylor, Tl L. Taylor, Tł	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Elem	olems. problems. engineering ent Method ent Method	problems , volume I, M volume II. M	lcGraw-Hi lcGraw-Hi	II, London, 5th
Basic reference materials	non-linearities: e Basic and advar Application of the 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000. 3. K-J. Bathe, Fir	.g. plasticity iced proced <u>e finite elen</u> vicz and R. vicz and R.	y and friction lures of solvi <u>hent method</u> L. Taylor, Th L. Taylor, Th t Procedures	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Elem	olems. problems. engineering ent Method ent Method	problems , volume I, M volume II. M Prentice-Hall,	IcGraw-Hi IcGraw-Hi , Englewoo	II, London, 5th II, London, 5th od Cliffs, 1982.
Basic reference materials	non-linearities: e Basic and advar Application of the 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and C	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T	y and friction lures of solvi nent method L. Taylor, Th L. Taylor, Th t Procedures he Finite Ele	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Elem in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
Basic reference materials	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and 0 5. T. J. R. Hugh	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem Finite Eleme in Engineering ement Method l	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
	non-linearities: e Basic and advar Application of the 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and C	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Eleme in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
Other reference materials	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiew edition, 2000. 2. O. C. Zienkiew edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and C 5. T. J. R. Hugh Prentice-Hall Int	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Eleme in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
Other reference materials Average student workload	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiev edition, 2000. 2. O. C. Zienkiev edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and 0 5. T. J. R. Hugh	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Eleme in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
Other reference materials Average student workload outside classroom	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiew edition, 2000. 2. O. C. Zienkiew edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and C 5. T. J. R. Hugh Prentice-Hall Int	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Eleme in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.
Other reference materials Average student workload	non-linearities: e Basic and advar Application of th 1. O. C. Zienkiew edition, 2000. 2. O. C. Zienkiew edition, 2000. 3. K-J. Bathe, Fir 4. G. Dhatt and C 5. T. J. R. Hugh Prentice-Hall Int	.g. plasticity iced proced <u>e finite elem</u> wicz and R. wicz and R. hite Elemen G. Touzot, T nes, The Fin	y and friction lures of solvi <u>nent method</u> L. Taylor, Ti L. Taylor, Th t Procedures The Finite Ele nite Element	al contact prot ng non-linear p to non-linear e he Finite Elem ne Finite Eleme in Engineering ement Method I	olems. problems. engineering ent Method ant Method g Analysis, F Displayed, S	problems , volume I, M volume II. M Prentice-Hall, lohn Wiley &	IcGraw-Hi IcGraw-Hi , Englewoo Sons, Chi	II, London, 5th II, London, 5th od Cliffs, 1982. chester, 1984.