

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
Національний університет «Запорізька політехніка»

МЕТОДИЧНІ ВКАЗІВКИ
до семінарських занять та самостійної роботи
з дисципліни «Мова науково-технічної комунікації»
для студентів II курсу спеціальності 035 «Філологія (германські мови
та літератури (переклад включно))»
всіх форм навчання

Методичні вказівки до семінарських занять та самостійної роботи з дисципліни «Мова науково-технічної комунікації» для студентів II курсу спеціальності 035 «Філологія (германські мови та літератури (переклад включно))» всіх форм навчання / укл.: А. Б. Підгорна. Запоріжжя: НУ «ЗП», 2019. 34 с.

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art, appetizing dining options and much more. Emulating the model of great urban parks around the country, Discovery Green is designed as an engaging and active place with seasonal programming to serve all ages and backgrounds. Visitors have a variety of dining experiences to choose from--from casual fare at The Lake House to informal elegance at The Grove.

3. The Active Directory® directory service is an integral component of network infrastructures that are based on the Microsoft® Windows Server™ Server 2003, Standard Edition; Windows Server™ 2003, Enterprise Edition; Windows Server™ 2003, Datacenter Edition, and Windows® 2000 Server, Windows® 2000 Advanced Server, and Windows® 2000 Datacenter Server operating systems. Successful management of Active Directory environments requires distribution of administrative responsibilities among multiple administrators according to organizational, operational, legal, and administrative requirements. Having the necessary background information, requirements, practices, and recommendations can help you delegate administration to more securely and efficiently manage Active Directory services and data.

4. That universal conception which is nearest to sense is that of the present, in general. This is a conception, because it is universal. But as the act of attention has no connotation at all, but is the pure denotative power of the mind, that is to say, the power which directs the mind to an object, in contradistinction to the power of thinking any predicate of that object, -- so the conception of what is present in general, which is nothing but the general recognition of what is contained in attention, has no connotation, and therefore no proper unity. This conception of the present in general is rendered in philosophical language by the word "substance" in one of its meanings. Before any comparison or discrimination can be made between what is present, what is present must have been recognized as such, as *it*, and subsequently the metaphysical parts which are recognized by abstraction are attributed to this *it*, but the *it* cannot itself be made a predicate. This *it* is thus neither predicated of a subject, nor in a subject, and accordingly is identical with the conception of substance.

5. While enjoying a month of fine weather at the sea coast, I was thrown into the company of a most fascinating creature: a real goddess in my eyes, as long as she took no notice of me. I `never told my love'

vocally; still, if looks have language, the merest idiot might have guessed I was over head and ears: she understood me at last, and looked a return--the sweetest of all imaginable looks. And what did I do? I confess it with shame--shrunk icily into myself, like a snail; at every glance retired colder and further; till finally the poor innocent was led to doubt her own senses, and, overwhelmed with confusion at her supposed mistake, persuaded her mamma to decamp. By this curious turn of disposition I have gained the reputation of deliberate heartlessness; how undeserved, I alone can appreciate.

6. The Bank confirms its interests in considering participation in the Project (subject to Section 8 below) through the provision of long-term financing, preferably in the form of a loan to the Company. The terms and conditions of any financing to be provided by the Bank (including margin, commitment charge and credit opening commission fee) will be negotiated after the Project appraisal taking into consideration the credit analysis of the Company and the City as well as the credit market conditions at the moment. However, the following indicative terms and conditions of the Loan are anticipated:

Currency: EUR

Maturity: up to 12 years (up to 3 years' grace with a possibility to start the paying-off earlier than in three years and up to 9 years for paying-off).

Main financing agreements and project agreements: Loan Agreement, Guarantee and Project Support Agreement, Municipal Support Agreement, Public Service Contract.

Procurement Rules: in accordance with the EBRD Procurement Policies and Rules.

7. With us it has become a truism that His positive teaching contrasted with the Rabbi's negative morality, that His "thou shalt" replaced the old "thou shalt not." Yet even now it may be doubted if we have made our moral code approximate to that of Jesus, or really have adopted His scale of values, His categories of right and wrong. He made astonishingly little of what were reckoned serious offenses; the omissions, the failures to use opportunities of doing good were the faults He condemned unsparingly. He put before His hearers a tremendous picture of a final judgment; its setting was reproduced, to a great extent, from Apocalyptic writings, but its

appraisals of conduct were emphatically new. And in that picture, as we shall remember, the hapless condemned "at the left hand" (Matt. 25:41) were not they who, in the common phrase, "had done wrong," but they who had failed to do right - they who wilfully had missed opportunities for kindness, for comforting, for helping, for showing love to their neighbors.

8. What's everyone doing for valentines? I'd like some ideas please - I've got my one single friend coming over on saturday night for dinner, drinks and moaning about men. I've been through all my recipe books but nothing is leaping out at me.

She's pesce and I'm vegan, I've got more or less all day to spend on shopping and cooking, and I think we'll fancy something spicy. No particular dislikes or allergies. Any ideas?

9. Address Book

There is ample room for the names, addresses and contact numbers of up to 700 friends and colleagues in its gold-edged pages, bound in fine-grain black leather with gilt corners. Goldblocked alphabetical tabs can be complemented by goldblocked initials on the front cover.

Goldblocking at £4.25 (total of £25.10)

10. Nikolai Aleksandrovich to Ania Vyrubova
Tobolsk, 10 December, 1917.

Thank you so much for your kind wishes on my name day. Our thoughts and prayers are always with you, poor suffering creature. Her Majesty reads to us all your lines. Horrid to think all you had to go through. We are all right here. It is quite quiet. Pity you are not with us. Kisses and blessings without end from your loving friend, N. Give my best love to your parents.

11. FOR a man whose bumper stickers promised "Hope not Fear", Barack Obama knows how to scare people. "If we don't act immediately," he told the citizens of Elkhart, Indiana on February 9th, "our nation will sink into a crisis that, at some point, we may be unable to reverse."

No one doubts that America's economy is in a bad way. But the notion that it might never recover was previously entertained only by

bearded survivalists stockpiling beans and ammunition in remote log cabins. Queried by a reporter about his “dire language”, he could have admitted that he exaggerated a bit. Instead, he launched a waffly attack—three times longer than the Gettysburg address—on all those who doubted his warnings.

It worked. On February 10th, at Mr. Obama’s urging, the Senate passed an \$838 billion stimulus package designed to jolt the economy out of its coma. That Senate bill then needed to be reconciled with an \$819 billion bill that the House of Representatives passed on January 28th. The two measures are broadly similar, but include a different mix of spending and tax cuts. The Senate bill has more tax breaks, including temporary relief for the middle class from the alternative minimum tax and incentives to buy houses and cars. The House bill has more help for cash-starved states to build schools and provide health care.

Семінар 2

Форматування науково-технічних текстів

Питання семінару

1. Скорочення та аббревіатури: їх види та специфіка використання в НТ текстах.
2. Відмінності в оформленні документів різних форматів (вітчизняний, MLA, APA, Harvard)
3. Формати оформлення списку використаних джерел в НТ текстах (вітчизняний, MLA, APA, Harvard)

Практичне завдання 2.1. Перекладіть та вивчіть латинські скорочення та стандартні позначення одиниць виміру, що використовуються в англомовних текстах НТЛ.

Таблиця 2.1 – Латинські скорочення

abbreviation	Latin words in full	Meaning
AD	anno Domini	since the birth of Christ
a.m.	ante meridiem	in the morning
BC		before Christ
c. or ca.	circa	approximately, about (for dates)

cf.	confer	Compare
e.g.	exempli gratia	for example, for instance
et al.	et alii / et alia	and others
etc.	et cetera	and so on, and the rest
et seq.	et sequens	and the following pages
ibid.	ibidem	in the same place / book
i.e.	id est	that is, in other words
	inter alia	among other things
loc.cit.	loco citato	in the place mentioned
NB	nota bene	note well (for an important point)
op. cit.	opere citato	in the work mentioned before
p.a.	per annum	a year, each year
	per capita	per head
p.m.	post meridiem	in the afternoon, evening
	passim	at various points in the book, recurrent
q.v.	quod vide	see in another place in the same book (for a cross-reference)
v. / vs.	versus	Against
viz.	videlicet	namely (naming something you have just referred to)

Standard units of measurements.

Units of measurement are abbreviated when used with numerical values but are not abbreviated if used without numerical values. The following are some standard abbreviations of units of measure.

C	Centigrade	F	Fahrenheit	K	Kelvin
in.	inch	cu. in.	(or in. ³)	s	Second
M	meter	cm	centimeter	kg	Kilogram
A	ampere	Mol	Mole	L	Liter
Rad	radian	C	coulomb	V	Volt
J	joule	Hz	Hertz	W	Watt
S	second	M	Molar	cd	Candela

Практичне завдання 2.2. Виправте помилки в оформленні НТ тексту (курсова/дипломна робота)

РОЗДІЛ 2

ЗАСОБИ ФОРМУВАННЯ ТЕКСТІВ ТЕХНІЧНОЇ РЕКЛАМИ

2.1 Структурні та графічні особливості текстів технічної реклами

Розгляд структури рекламного тексту вважаємо за потрібне почати з окреслення структурних типів рекламних текстів. Так, виокремлюють: 1. коротку рекламу, що представляє собою товарне або фірмове ім'я, слоган, фразу (малий жанр), 2. рекламне оголошення (середній жанр), 3. рекламну статтю (великий жанр). [30, 58] Малий жанр містить найменшу кількість структурних елементів і лише привертає увагу до предмету реклами і пропозиції.

Наступним дієвим, але необов'язковим, графічним засобом подання рекламного послання є ілюстрації, які допомагають досягти ясності, точності та виступають як ще один спосіб зацікавити читача:

Forrest8" 2-pcBox Joint
Blade Set
Our Price: \$109.95



Ілюстрація в тексті технічної реклами та підпис до неї

З прикладу бачимо, що підпис до ілюстрації розташований в правому верхньому кутку, що привертає ще більше уваги. У підписі надається додаткова, але дуже важлива інформація щодо виду підшипника та ціни на нього.

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5. J. Williamson Decoding Advertisements, L.: Europa Press, 1978, 430 p.

Джерела ілюстративного матеріалу

1. Any challenge. Every platform. Exceptional Solutions // Aviation Week and Space Technology, 2012, August, 13, P. 9
2. Australian Security Professionals // ASP: [сайт]. – <http://www.asprotection.com.au/introduction.htm>

ДОДАТКИ

Додаток А

Зразки перекладу текстів технічної реклами

Alarm & Fire Equipment Suppliers Up-to-date fire alarms are critical to your business or family's safety.	Постачальники сигналізації та протипожежного обладнання Сучасні пожежні сигналізації мають вирішальне значення для
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Семінар 3

Лексичні групи в науково-технічних текстах

Питання семінару

1. Омонімія та полісемія термінів. Терміни та контекст.
2. Способи термінотворення. Найбільш розповсюджені префікси та суфікси англійської мови (їх значення та класифікації).

3. Інтернаціоналізми, псевдоінтернаціоналізми та квазіінтернаціоналізми: диференціація понять
4. Фразеологія в НТЛ.
5. Індикатори різних логічних категорій. Слова-зв'язки.

Практичне завдання 3.1. Визначить тип терміну: *income* (дохід), *over the counter* (позабіржовий), *profit* (прибуток), *infrastructure* (інфраструктура), *goodbye kiss* (скупка акцій своєї компанії за високу ціну у компанії, що погрожує поглинанням).

Практичне завдання 3.2. Класифікуйте терміни за структурою: *bodyshell*, *sales outlet*, *anti-lock braking system*, *aerodynamics*, *situation-related shock absorber control system*.

Практичне завдання 3.3. Поясніть спосіб творення наданих термінів: *formula*, *camshaft*, *spoiler*, *supercharger*, *pushrod*, *to market*, *hp*, *e-mail*, *airlock*, *calculus*, *combustor*, *enclose*, *upgraded suspension*.

Семінар 4

Аналіз структурних та лексичних особливостей текстів науково-технічної літератури

Питання семінару

Аналіз наукового (науково-технічного) тексту з огляду на його структурні та лексичні характеристики.

Практичне завдання 4.1. Проаналізуйте україномовний науковий текст з огляду на його структурні та лексичні характеристики.

ФРАЗЕОЛОГІЧНІ РЕАЛІЗАЦІЇ ФІТОНІМІВ ІЗ КОНОТЕМОЮ 'МІЦНИЙ' В УКРАЇНСЬКІЙ ТА АНГЛІЙСЬКІЙ МОВАХ.

Метою даної статті є розгляд фразеологічної сфери реалізації культурного компонента лексичної семантики на прикладі фітонімів із конотемою 'міцний' української, англійської та деяких інших мов, виділення схожих та розбіжних тенденцій у цьому процесі.

Наукова проблематика статті пов'язана із зростаючими потребами лінгвокультурології, порівняльного мовознавства для пристосування матеріалу подібного характеру у практиці перекладу, міжкультурної комунікації та лінгвокультурологічної інтерпретації.

У певних мовних ситуаціях складники лексичних конотацій, такі як образність, оцінність, емотивність та експресивність здатні активізуватися не поодинокі, а в комбінації з іншими складниками. Це пояснюється не лише тим, що “емоція, оцінка, експресія не властиві слову мови і народжуються тільки в процесі його живого використання в конкретному висловленні” [Бахтин 1979, с. 266], а й динамікою людської свідомості, яка формує структуру лексичного значення слова як “міцно спаяний конгломерат вторинних образів, емоцій та превербальних уявлень” [Антонов 1984, с. 19].

Прослідкуймо, наприклад, яку роль формальна аналогія відіграє в утворенні фразеологізмів української, англійської та німецької мов, у яких фігурує однаковий референт: укр. *дати залізного бобу з їсти* – “убити”; англ. *blue beans* (досл. “блакитні боби”) – “кулі”; нім. *die blaue Bohnen* – те саме.

З наведених прикладів видно, що в усіх трьох випадках у свідомості спрацьовує формальна аналогія між референтами “біб” та “куля”. Різниця полягає в тому, що український фразеологізм має похідний, або вторинний характер, з використанням раніше утвореного сполучення *залізний біб*, що само по собі вже є фразеологізмом, тоді як в англійському та німецькому варіантах подібної деривації не спостерігається. Таким чином, конотації лексичні одиниці різних мов подібного характеру та подібної аналогово-асоціативної бази можуть виникати не лише між лексемами-корелятами, а й між лексемами, що позначають різні денотати, які в реальному житті виступають різними складниками одного таксономічного класу.

Подібна транспозиція оцінки подій однієї ситуації на оцінку подій іншої пояснюється тим, що “асоціативні зв'язки між словами не є випадковими: вони детерміновані всією пізнавальною діяльністю людини. Елементи концептуального рівня знаходять своє відображення у зв'язках внутрішнього лексикону, організовуючись у фрейми різного рівня узагальнення” [Мартинек 2000, с. 372].

Отже, при проведенні аналізу ФО, у яких образно-змістовим ядром виступають фітоніми, можна побачити, що конотації, які вони

виявляють, активізують не один, а певну сукупність своїх складників. Активізація образного складника, який формується переважно на основі міфів, повір'їв, забобонів, має національний або спільнокультурний характер, причому національний характер виявляється частіше.

Конотації, які є спільними для фітонімів-корелятивів обох мов, виникають унаслідок реалізації конотем, що позначають найяскравіші ознаки відповідних фітоденотатів. Якщо конотема, яка фіксує яскраву, типову ознаку в лексемі однієї мови (умовно – мова А), не активізується в кореляті іншої мови (умовно – мова Б), для носіїв мови Б вона все ж таки матиме відносно очікуваний характер, а отже, буде цілком зрозумілою в ході міжкультурної комунікації.

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Практичне завдання 4.2. Проаналізуйте російськомовний науковий текст з огляду на його структурні та лексичні характеристики.

Глава 1. Онтология бытия

Онтология – раздел философии, исследующий бытие, каковое, по Аристотелю, «само по себе приписывается всему тому, что обозначается через формы категориальных высказываний».¹ В Средние века в качестве обозначающего этот раздел философии использовался термин «метафизика». Закреплению термина «онтология» способствовало широкое распространение вольфианства в материковой Европе XVIII в. По определению Даламбера, поскольку «объекты, как духовные, так и материальные, которыми ум оперирует, имеют некоторые общие свойства, как бытие, возможность, продолжительность, то исследование этих свойств образует сначала ту ветвь философии, принципы которой все остальные отчасти заимствуют: она называется онтологией, или наукой о сущем, или общей метафизикой».² Онтология «является основой наших знаний, только в ней нужно искать ясных и точных знаний обо всем», хотя

следует иметь в виду, что речь идет о «науке» «весьма часто сомнительной и спорной».³ Таким образом, онтология определяется как учение о наиболее общих свойствах бытия и первых посылках познания.

¹ Аристотель. Соч.: В 4 т. Т. 1. М., 1986. С. 156.

² Философия в «Энциклопедии.» Дидро и Даламбера. М., 1994. С. 87.

³ Там же. С. 107.

§ 1. Становление основ онтологии в античности

Становление онтологии в европоцентрической культуре происходит в эпоху античности. Характерными чертами стиля мышления этой эпохи было, во-первых, то, что теоретическое мышление еще только формировалось на базисе обыденного сознания с присущей ему тенденцией воспроизведения очевидности обыденного опыта и его схематизацией. Общая зависимость, из которой с логической последовательностью мог быть выведен естественный порядок явлений, подыскивалась умозрительно, исходя из фактов повседневных наблюдений, и восходила от них сразу к философской картине мироздания без каких-либо опосредствующих шагов. Во-вторых, в непосредственный познавательный базис умозрительных заключений входили мифологические представления «жреческой науки», опыт ремесленника и еще разрозненные данные формирующейся прото-науки; высока была роль авторитета предания. В-третьих, стилю мышления первых философов («мудрецов», «софистов») были присущи метафоричность, с помощью которой приходилось восполнять недостаточную разработанность приемов и средств теоретического мышления, стремление оперировать готовым набором устойчивых образов и представлений, смешивание реального и идеального, слова и действия, действительности и мнения, неотчетливое различие субъекта и объекта, вещи и свойств, отсутствие интереса к будущему, к изменениям, к новизне.¹

Эти черты, характеризующие интеллектуальный климат эпохи формирования античной философии, полностью проявляются в процессе становления основ онтологии в Древней Греции. Как у многих народов, впервые освоивших металлургию и таким образом получивших первые наглядные представления о фазовых состояниях вещества, здесь возникает идея четырех основных состояний материи

– твердого, жидкого, газообразного, огневого (земля, вода, воздух, огонь) и впервые ставится проблема, «из чего все сущие [вещи] состоят, из чего, как из первого, возникают и во что, как в последнее, они уничтожаются».²

Практичне завдання 4.3. Проаналізуйте англomовний науковий текст з огляду на його структурні та лексичні характеристики.

Fat mass and obesity associated, also known as FTO, is a gene on human chromosome 16 in which certain variants appear to be correlated with obesity in humans. A study of 38,759 Europeans for variants of FTO identified an obesity risk allele [1]. In particular, carriers of one copy of the allele weighed on average 1.2 kilograms (2.6 lb) more than people with no copies. Carriers of two copies (16% of the subjects) weighed 3 kilograms (6.6 lb) more and had a 1.67-fold higher rate of obesity than those with no copies. The association was observed in ages 7 and upwards. This gene is not directly associated with diabetes, however, it increases body-fat which increases the risk of developing Type 2 Diabetes.

Simultaneously, a study in 2,900 affected individuals and 5,100 controls of French descent, together with 500 trios (confirming an association independent of population stratification) found association of SNPs in the very same region of FTO (rs 14210850) [6]. The authors found that this variation, or a variation in strong LD with this variation explains 1% of the population BMI variance and 22% of the population attributable risk of obesity. The authors of this study claim that while obesity was already known to have a genetic component (from twin studies), no replicated previous study has ever identified an obesity risk allele that was so common in the human population. The risk allele is a cluster of 10 single nucleotide polymorphism in the first intron of FTO called rs9939609. According to HapMap, it has population frequencies of 45% in the West/Central Europeans, 52% in Yorubans (West African natives) and 14% in Chinese/Japanese. Furthermore morbid obesity is associated with a combination of FTO and INSIG2 single nucleotide polymorphisms.

In 2009 variants in the FTO gene were further confirmed to associate with obesity in two very large genome wide association studies of body mass index (BMI).

In adult humans it was shown that adults bearing the risk AT and AA alleles at rs9939609 consumed between 500 and 1250 kJ more each day

than those carrying the protective TT genotype (equivalent to between 125 and 280 kcal per day more intake) [10]. The same study showed that there was no impact of the polymorphism on energy expenditure. This finding of an effect of the rs9939609 polymorphism on food intake or satiety has been independently replicated in five subsequent studies (in order of publication). Three of these subsequent studies also measured resting energy expenditure and confirmed the original finding that there is no impact of the polymorphic variation at the rs9939609 locus on energy expenditure. A different study explored the effects of variation in two different SNPs in the FTO gene (rs 17817449 and rs1421085) and suggested there might be an effect on circulating leptin levels and energy expenditure, but this latter effect disappeared when the expenditure was normalized for differences in body composition. The accumulated data across seven independent studies therefore clearly implicates the FTO gene in humans as having a direct impact on food intake but no effect on energy expenditure. In contrast to the findings in humans deletion analysis of FTO gene in mice showed loss of function of FTO in mice is associated with no differences in energy intake but greater energy expenditure and this results in a reduction of body weight and fatness. The reasons for the differences between humans and mice in the function of the FTO gene is presently uncertain. However, many other genes involved in regulation of energy balance exert effects on both intake and expenditure. It is perhaps not surprising therefore that the emphasis of action can vary between species with the effect in humans targeted on intake, and that in mice targeted on expenditure.

Семінар 5

Граматичні особливості науково-технічних текстів

Питання семінару

1. Засоби емпізи в НТЛ (графічні, лексичні та граматичні).
2. Надлишковість в науково-технічних текстах (подвійні заперечення, тавтологія, плеоназм, подвійні прийменники).
3. Аналіз тексту з точки зору наявності в ньому граматичних особливостей НТЛ.

Практичне завдання 5.1. Розкрийте дужки, звертаючи увагу на використання збірних іменників:

- a) The couple (to work) at two different hospitals.
The couple (to need) counseling.
- b) The police (to be) an important institution.
The police (to be) quick to respond to the alarm.
- c) The faculty (to come) from many different areas.
The faculty recently (to transform).
- d) The majority of his time (to go) into report writing.
The majority of results (to be) correct.
- e) Ten percent of the staff (to work) flexible hours.
Ten percent of her income (to go) to the research foundation.
- f) Genetics (to be) a popular field of research nowadays.
The genetics of the fruit fly (to elucidate) in our laboratory.

Практичне завдання 5.2. Проаналізуйте тексти з точки зору наявності в них граматичних особливостей НТЛ.

Brain Cells Chat, Even Without a Synapse

by Cassandra Willyard

ScienceNOW Daily News

29 October 2009

A team of Hungarian researchers at the University of Szeged made the discovery by examining a type of neuron called a neurogliaform cell. These cells are common in the brain's cortex, a region that plays a key role in many functions, including memory, attention, awareness, and language. Studies have shown that neurogliaform cells can inhibit the firing of other brain cells by releasing a neurotransmitter called GABA (gamma-aminobutyric acid), which typically transmits messages across synapses. But some studies have suggested that GABA can diffuse into the extracellular space as well, where it carries messages between neurons not connected via synapses. To create enough ambient GABA for this to happen, however, scientists speculated that many neurons would have to fire at once. The researchers set out to test this idea.

The output end, or axon, of a normal neuron is typically long and stringy. But when the Hungarian team used electron and light microscopes to examine brain tissue from rats and humans, they found that neurogliaform cells have bushy axons with many branches. These bushy

axons are densely populated with sites where GABA can be released into the extracellular space, the team found. Elsewhere in the brain this occurs mainly at synapses, but only 11 of the 50 release sites examined in neurogliaform cells corresponded to a synapse, the researchers report today in *Nature*. Additional experiments confirmed that a single neurogliaform cell, when stimulated, releases enough GABA to inhibit the activity of nearby neurons not connected by synapses.

P-REX2a Driving Tumorigenesis by PTEN Inhibition

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5EH, UK.

Abstract: The phosphatase PTEN (phosphatase and tensin homolog deleted on chromosome 10) antagonizes phosphoinositide 3-kinase (PI3K) signaling and is one of the most frequently mutated tumor suppressors in human cancers. Its regulation appears complex and is of great potential clinical importance. The protein P-REX2a (phosphatidylinositol 3,4,5-trisphosphate Rac exchanger 2a), better known as a regulator of the small guanosine triphosphatase Rac, has been identified as a direct regulator of PTEN activity and as a potential oncoprotein. P-REX2a can stimulate cell proliferation by inhibiting PTEN and stimulating downstream PI3K-dependent signaling. This suggests that aberrant control of PTEN by P-REX2a may represent a key tumorigenic mechanism, in agreement with recent studies supporting the pathological relevance of several other proposed PTEN regulators.

Семінар 6

Синтаксичні особливості науково-технічних текстів

Питання семінару

1. Другорядні члени речення: їх види та місце в реченні.
2. «Блукаючі» означення та обставини.
3. Засоби синтаксичної компресії в англомовних текстах НТЛ.

Практичне завдання 6.1. Визначте підмет та присудок у наданих нижче реченнях.

1. Never mind: there are people for that, and they have ideas.
2. How the air is directed to the work becomes even more critical as things like baskets, internal fixtures, and even the load itself can affect the path the heating air takes."
3. In solution heat treating, load sizes and production demands mean that load densities must be factored into heating times.
4. Heat treating can add value to some finished castings, and some customers' orders include heat-treating as a design element.
5. Seco/Warwick Corp.'s Aluminum Group made a patent application for its "Method for uniform flow distribution of recirculated process gas in heat processing equipment."
6. Mahoney cites a test showing that aluminum castings can, in some cases, achieve the desired tensile and hardness qualities in less time using the new approach.
7. In solution heat treating, load sizes and production demands mean that load densities must be factored into heating times.
8. Most heat-treating systems for castings involve mass-flow heating or solution heat treating, and each presents some inefficiencies.
9. By closely controlling the heating rate, the soak time can be reduced.
10. The plasma-generating process may be adapted to other metal processes, too.
11. The speed of heating air passing across the load determines the time it takes to heat the work.
12. Traditionally, microwave technology requires creating a vacuum, but AtmoPlas operates at atmospheric pressure.
13. Another big plus for AtmoPlas is the evidence that it reduces energy.
14. Metallurgists and customers alike are demanding closer temperature tolerances than ever before

Практичне завдання 6.2. Прочитайте тексти та знайдіть в них окреслені нижче члени речення:

A. Advanced process controls have helped to automate the pouring process in a cost-effective manner. This has been particularly effective in

jobbing applications where product metallurgy may change from job to job. Pressure pour and stopper rod techniques have been, and remain, effective solutions for applications, usually high-volume, that do not require frequent metallurgy changes. Improved control technology has made it possible to produce cost-effective open-ladle pouring devices. To a large extent these devices replicate what the skilled artisan has done in the past.

These devices are precise and when properly set up reduce the over-pour to near zero. Depending on the amount, this offers an immediate increase in salable product (for the same melting cost) or, alternatively, reduces the amount of metal to be melted. Also, these devices can be synchronized to the molding line both mechanically and electronically, and can adjust to product changes requiring a different location and different pour weight and pouring profile. As with automatic grinding technology the "teach" method is commonly used to replicate the time-proven pouring profile of an experienced pouring artisan.

- а) формальний додаток
- б) фразовий (груповий) підмет
- в) підрядне додаткове речення
- г) присудок у пасивному стані
- д) обставина мети
- е) інвертована обставина міри і ступеня дії
- є) означення, що виражене інфінітивом
- ж) підрядне означальне речення
- з) еліптичне підрядне речення
- и) анафоричний підмет

Б. The dryness and ageing state of the oil-paper insulation is a key factor in both the short and long term reliability of a power transformer since moisture has deleterious effects on dielectric integrity and insulation ageing rates. Today the water content of the cellulose of a transformer in service is determined indirectly via moisture measured from oil samples according to IEC 60422. Moisture distributes unequally between the oil and the pressboard, the greater part residing within the solid insulation. Because the water concentration in the oil is highly temperature dependent, the measurement of moisture in oil is not a particularly reliable indicator of dryness in the cellulose, particularly not for lightly loaded transformers. Although in principle moisture can also be extracted from pressboard samples and measured, this approach is hampered by the impossibility of

obtaining samples from critical locations. Furthermore, a significant variation in results can arise from different practices regarding sample storage and preparation.

Until recently the RVM technique has by far been the most frequently used method. However, there has been much controversy surrounding the technique, which has been criticized on various grounds. As a result CIGRE Working Group reviewed the opinions of users of polarization techniques and concluded that although such techniques showed promise, more work was required to validate the techniques and improve the interpretation of results.

- а) постпозитивне означення, що виражене Past Participle
- б) складений прикметниковий присудок
- в) складений іменний присудок
- г) препозитивне означення, що виражене Past Participle
- д) формальний підмет
- е) обставина мети
- є) підрядне означальне речення
- ж) обставина, що виражена Absolute Participle Construction
- з) постпозитивне означення, що виражене Present Participle
- и) підрядне обставинне речення

B. Surface enhancement is widely used to improve the fatigue life of components by creating a surface layer of compressive residual stress that delays fatigue crack initiation and retards small crack propagation. Surface enhancement methods producing minimal cold work are shown to produce the most thermally stable compression. The residual stress and cold work distributions developed in IN718 by shot peening, gravity peening, laser shock peening (LSP) and low plasticity burnishing (LPB) are compared. Thermal relaxation at temperatures ranging from 525 C⁰ to 670 C⁰ is correlated to the degree of cold working, independent of the method of surface enhancement. Highly cold worked (>15%) shot peened surfaces relax to half the initial level of compression in only minutes at all temperatures investigated. The rapid initial relaxation is shown to be virtually independent of either time or temperature from 525 C⁰ to 670 C⁰. High cycle fatigue (HCF) performance after elevated temperature exposure is compared for surfaces treated by LPB and conventional {8A intensity} shot peening. Since the introduction of shot peening, the HCF life of components has been improved by "surface enhancement" to induce a

surface layer of compressive residual stress. Of the three mechanisms for residual stress relaxation: thermal, overload, and cyclic, only thermal relaxation is significant for nickel base superalloys in HCF limited applications. This paper summarizes research of the thermal stability of surface enhancement methods applied to the nickel base superalloy, IN718.

- а) обставина мети
- б) підрядне означальне речення
- в) груповий підмет
- г) інвертований прийменниковий додаток
- д) агентивний неживий підмет
- е) суб'єктно-предикативний інфінітивний зворот (Complex Subject)
- є) Past Participle у постпозиції до означувального слова
- ж) обставина способу дії, виражена герундієм
- з) обставина місця
- и) Present Participle у постпозиції до означувального слова

Практичне завдання 6.3. Змініть речення, щоб уникнути використання в них «блукаючих» означень та обставин

1. Tired of life and drinking to forget his failure, we have much sympathy for the hero of this book.
2. He ran out of the bathroom and along the corridor after the mailman all covered in shaving cream.
3. Examining the character of the main character, it is clear that he is the source of many problems in his family.
4. Exhausted and very hungry, the journey was finished.
5. To get to the root of the problem, King Lear's relationship with his daughters has to be examined.
6. After reaching the end of the play, Maggie is still confusing to me.
7. After examining all the arguments, it seems that there is no answer to the Arab-Israeli conflict.
8. It is never entirely clear just what sort of relationship Hamlet and Ophelia have or have not had, after reading the script over many times.
9. Driving all night through the pouring rain, his tiredness made him fail to see the pedestrian.
10. After thinking about the benefits of re-organizing, the decision was made to delay the proposal.

Семінар 7

Пунктуація в текстах науково-технічної літератури

Питання семінару

1. Специфічність ролі пунктуації в НТЛ.
2. Уникнення неоднозначності змісту в НТЛ завдяки коректному використанню пунктуації.

Практичне завдання 7.1. У разі необхідності розставте коми у наданих нижче реченнях.

1. As this article points people like animals can become disturbed if they are denied the space they need.

2. Once you have seen the evidence you will in my opinion agree that he is guilty.

3. When I give you the signal make sure you start the car drive down the street and pull up in the parking space beside the store.

4. Mr. Tom Jackson the Vice-Principal of our school was the person who introduced the rules about attendance after he had been given instructions to do so by the District Superintendant Ms Camille Smythe.

5. Ibsen's play *A Doll's House* features two main characters Nora and Torvald who are married to each other.

6. Students who are ineligible for scholarships can still apply for these special bursaries but they will have to wait until September to do so.

7. My eldest brother John who is a professional football player will get us tickets to the championship game which is going to be played in Toronto.

8. The Prime Minister of Canada Jean Cretien made a speech in the House of Commons yesterday September 23 at 3:00 p.m.

9. After reading the report which you gave me yesterday I changed by mind but according to the original memordanum it's too late for me to do anything about it.

10. The evidence described in the article "New Risks Possible with Exedran" which was published last month raises some doubts about the product at least in the minds of consumers so we need to reduce the number of orders for this product.

Практичне завдання 7.2. У разі необхідності розставте коми у наданих нижче реченнях або приберіть зайві.

When I read Shakespeare's play *Hamlet* I find the conduct of the main character Hamlet frequently puzzling and I keep having to stop for a while to think about what he is doing and why, this exercise is both intriguing and often frustrating. On the one hand I like certain things about Hamlet for example his "philosophical" tendency which appears most frequently in his soliloquies often comes up with thought-provoking images which are quite memorable, on the other hand there are many things which I dislike intensely for example his brutality towards women his constant manipulation of other people his morbid sense of death and his moodiness his sense of humour strikes me as decidedly odd even warped at times. Nevertheless I remain fascinated by his mind which is always churning over something and by his verbal dexterity which I have to admit is very funny even if it is also at time very cruel. The instructor claims that this is a very ambiguous complex and disputed play and I can well understand why, there is just so much pulling us in different directions. Sometime I feel great sympathy for the King of Denmark Claudius the brother of the murdered king who is in my view a loving husband to his wife Gertrude mother of Hamlet and ex-wife of the dead king but then I remember that Claudius is a murderer and dissembler and my sympathy which was generally quite strong evaporates. Polonius the Chief Minister of the king is another character who is difficult to figure out, sometimes he seems something of a buffoon always making a fool of himself but then at other times he appears very shrewd conniving and intelligent, he likes to spy on people especially his family and is clearly uneasy if he does not know what is going on. When he uses his daughter Ophelia to try to trap Hamlet I sense he is really quite callous ready to sacrifice his children's feelings to his political duties but his children it strikes me genuinely love and respect him and he does seem to care for them in his own way, so once again I don't know quite where to put my sympathies. As I say it is a confusing piece it may be fascinating but it certainly takes some effort to sort out just what one thinks about these characters.

Практичне завдання 7.3. У разі необхідності розставте коми у наданих нижче реченнях або приберіть зайві.

I really enjoyed watching the World Cup of Soccer last July the best international tournament I have ever seen. Although soccer is not a

major TV sport TSN provided good coverage and the commentary was generally interesting and informed. I watched almost all the early games and didn't miss any of the quarter finals semi-finals and the final. In many cases the quality of the game wasn't as good as one might hope for but the intensity of crowd which was something I was not used to really livened things up and made every match exciting. My favorite teams were Nigeria England France Holland and Brazil but I also started cheering on the Croatians who were such amazing underdogs. There is however one thing that really irritates me and that is the shootout the way that the teams obtain a result if the game is still tied after full time and overtime, it's silly to make the whole thing come down to penalty kicks. One person the one who misses the shot emerges as the bad player of the game no matter how he might have performed in the actual game. If people want professional soccer to catch on in North America then they should do something about that stupid rule because North Americans like a result which is determined on the playing field not in some silly procedure governed by luck and I got tired of the advertisements especially the ones for Mastercard Burger King and Gillette, you'd think that companies which had spent an enormous amount to sponsor the tournament would pay a little more for some variety in their advertisements so that people who watch all the games don't get infuriated with the endless repetitiveness of the long monotonous and familiar pitch. Apart from those two things which are not major complaints however everything about the tournament was exciting enjoyable and intense I can't wait until the next World Cup.

Практичне завдання 7.4. Розставте необхідні знаки пунктуації.
What are directories?

Like files directories are containers but instead of text or other data directories contain files in addition directories are hierarchically organized that is a directory has a parent directory above and may also have subordinate child directories below each child directory in turn may contain other files and may also have child directories and so on because they are hierarchically organized directories provide a logical way to organize files.

Практичне завдання 7.5. Перепишіть текст, скорегувавши стиль та пунктуацію.

Considering all the evidence in the trial, it is clear that the verdict which was delivered by the jury very quickly is very odd, many people are

very angry about the proceedings, which is increasing racial tensions in a city already very conscious of racial inequality in jobs and housing and how blacks are discriminated against by city officials, especially the police. It is all very alarming. After deciding the verdict, many TV programs interviewed jurors, a person who watched these shows might find themselves getting angry about the workings of the justice system and how so many of the jurors appeared stupid misinformed biased or generally inadequate, moreover it is being claimed that anti-Semitism in the black community is on the rise since the trial. The March on Washington the so called million man march which was organized by the Nation of Islam brought into the national spotlight Louis Farrakhan a person well known for his extreme remarks against Jews, this has upset the Jewish community considerably and Robert Shapiro the leader of the Simpson defense team as soon as the decision was made by the jury indicated that he did not agree with the tactics of the defense and sought to put a distance between himself and Johnnie Cochrane who had made the summation for the defense. A person living in LA might seriously begin to worry about the future of their community and beyond that how the racial question in the entire country is being handled by politicians and the media.

Семінар 8

Жанрово-стилістичний аналіз науково-технічного тексту

Питання семінару

1. Власне наукові тексти.
2. Науково-навчальні тексти.
3. Науково-оцінні тексти.
4. Інформаційно-реферативні тексти.
5. Довідково-енциклопедичні тексти.
6. Власне технічні тексти (паспорти, формуляри, технічні описи, інструкції до експлуатації, патенти, авторські свідоцтва).
7. Технічна реклама.
8. Науково-популярні тексти.

Практичне завдання 8.1. Прочитайте уривки англomовних текстів НТЛ різних жанрів, назвіть жанр та окресліть його найбільш виразні ознаки.

1. A turboshaft engine is a form of gas turbine which is optimized to produce shaft power, rather than jet thrust. In principle a turboshaft engine is similar to a turbojet, except the former features additional turbine expansion to extract heat energy from the exhaust and convert it into output shaft power. Ideally there should be little residual thrust energy in the exhaust and the power turbine should be free to run at whatever speed the load demands.

The general layout of a turboshaft is similar to that of a turboprop, the main difference being the latter produces some residual propulsion thrust to supplement that produced by the shaft driven propeller. Another difference is that with a turboshaft the main gearbox is part of the vehicle (e.g. helicopter rotor reduction gearbox), not the engine. Virtually all turboshafts have a "free" power turbine, although this is also generally true for modern turboprop engines. At a given power output, compared to the equivalent piston engine, a turboshaft is extremely compact and, consequently, lightweight.

2. Barracuda engineering software was developed to solve particle flow problems inside CPI units. Its breakthrough numerical method, computational-particle-fluid-dynamics (CPFD), makes it both fast and powerful.

It ensures accurate 3D simulations because the particles are treated correctly as true solids with any size or density distribution. Well validated, its models for gas compressibility, thermal solids, and chemical reactions make Barracuda unique CAE technology. Commercial applications are broad-deep-bed reactors, CFB units and risers, cyclones, dryers, spargers, strippers, settlers, and more. Barracuda is proven technology for solving plant operating, modifications, and start-up problems, saving you time and money.

Barracuda is very accurate since it treats particles correctly as discrete solids, not as fluid, with true size distributions; and it runs extremely fast too as accuracy and speed are critical issues for engineering success. Already applied extensively in the chemical and petrochemical industries, Barracuda offers unique technical capabilities.

3. DuPont Performance Lubricants and Coatings offer a unique combination of properties that provide exceptional solutions to your most difficult problems. DuPont lubricants can increase the service life of critical components, allowing equipment manufacturers to extend warranties and manufacturing plants to reduce costly maintenance, while improving productivity by reducing component failure. They can be a significant contributor to lowering the costs of doing business.

From the aggressive world of chemical processing, to the high temperatures in state-of-the art automotive applications, to the critical tolerances of aerospace military specs, and in many other demanding industries, DuPont lubricants are becoming the lubricants of choice worldwide.

4. "Renewable energy sources in European Union and in Slovakia".
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European Union along with Slovakia as the EU member state has to solve many problems related to sustainable energy supply. European commission is aware that the main part of European energy sector depends on fossil fuels – usually from politically and economically not stable regions. Solution can be found in renewable energy sources and energy effective technologies. The article gives an overview of political and legislative framework of renewable energy sources support and regulations both on European and Slovak level. Although Slovakia has significant potential in renewable energy sources (e.i. heat from biomass, geothermic and solar energy), these sources are still utilized only in very small amount. Thanks to EU accession of renewable energy directives in 2004 at least some support schemes have been implemented in Slovakia: investment support from EU structural funds and fixed feed-in tariffs for the renewable electricity. Situation is slightly changing towards better renewable energy utilization mainly due to significant natural gas, heat and electricity price increase in last period.

5. The washing machine was designed and built in compliance with the applicable international safety regulations. The following information is provided for your safety and should consequently be read carefully.

General safety

- This washing machine should only be used by adults and in accordance with the instructions provided in this manual.

- Do not pull on the power supply cable to unplug the appliance from the electricity socket. Pull the plug out yourself.
- Never force the washing machine door: this could damage the safety lock mechanism designed to prevent any accidental openings.
- In the event of a malfunction, do not under any circumstances touch internal parts in order to attempt repairs.
- Always keep children well away from the appliance while in operation.
- Should it have to be moved, proceed with the help of two or three people and handle it with the utmost care. Never try to do this alone, because the appliance is very heavy.

6. Measuring Methods. To measure polarisation and depolarisation currents (PDC) following a DC voltage step is one way in the time domain to investigate the slow polarisation processes. Both polarisation current, $i_p(t)$ as well as depolarisation current, $i_d(t)$ contain information about the dielectric response function, $f(t)$, provided the test object is charged for a sufficiently long time. It is easiest to use the depolarisation current $i_p(t)$ where there is no DC current present. Many solid dielectric materials have dielectric response functions that decrease slowly with time. A rule of thumb says that the test object should be charged for at least 5 to 10 times as long as it is depolarised in order to get a depolarisation current, which is proportional to the dielectric response function. It is also possible to estimate the DC conductivity, σ_{dc} , of the test object from the measurements of the polarisation and depolarisation currents.

7. Critique. Unfortunately, there are substantial flaws in the simulations and in reporting of simulated data which prevent me from recommending publication, at present. A crucial flaw is that the authors "hide" the simulation data (on which the major conclusions are based). Appendix-1, comparing simulated and observed data, simply states whether the comparison was "high," "low," or "overlap/non-significant difference". It is necessary for the authors to report (numerically) the simulated data range, to show whether the observed data falls within, and "how close" the real and simulated data are, which is key information for readers. This is often shown graphically (see (16) Fig 3, (17) Fig 3, (18) Fig 6), but the authors could simply replace "high", "low" etc., with the numerical range from the simulations. Another flaw is the reliance on only diversity-based

summary statistics; differentiation-based statistics are not deployed at all, despite "differentiation" appearing in the title and throughout the manuscript. Both diversity- and differentiation-based summary statistics (usually FST) are nearly always used in similar investigation of multiple population simulations. Using STRUCTURE to examine population subdivision is interesting and useful, but not sufficient for comparing simulated and observed data- it is somewhat qualitative, and was used on only three datasets per scenario. The hallmark of this manuscript is the objective, quantitative nature of simulation work, but the interpretation of STRUCTURE results (lines 364-370, 376-378, 389-395, etc.) is entirely subjective (e.g. different cluster membership thresholds per scenario, discussing results in "cherrypicking" fashion, STRUCTURE results not used for scenario 5). Using FST (and/or RST) solves these problems, allowing the same quantitative comparison used on diversity statistics- e.g. does the observed value fall within the range of simulated data or not. Additionally, FIS and M-ratio are valuable summary statistics (33-35) for comparing scenarios, due to the unique information they capture. Testing FST, FIS, and M-ratio (and placing results as columns in Appendix-2) is highly advised.

8. ENHANCED OIL RECOVERY refers to the process of producing liquid hydrocarbons by methods other than the conventional use of reservoir energy and reservoir repressurizing schemes with gas or water. On the average, conventional production methods will produce from a reservoir about 30% of the initial oil in place. The remaining oil, nearly 70% of the initial resource, is a large and attractive target for enhanced oil recovery methods.

9. It's very hard to overstate how important the US power grid is to American society and its economy. Every critical infrastructure, from communications to water, is built on it and every important business function from banking to milking cows is completely dependent on it.

And the dependence on the grid continues to grow as more machines, including equipment on the power grid, get connected to the Internet. A report last year prepared for the President and Congress emphasized the vulnerability of the grid to a long-term power outage, saying "For those who would seek to do our Nation significant physical, economic, and psychological harm, the electrical grid is an obvious target."

The damage to modern society from an extended power outage can be dramatic, as millions of people found in the wake of Hurricane Sandy in 2012. The Department of Energy earlier this year said cybersecurity was one of the top challenges facing the power grid, which is exacerbated by the interdependence between the grid and water, telecommunications, transportation, and emergency response systems.

So what are modern grid-dependent societies up against? Can power grids survive a major attack? What are the biggest threats today?

The grid's vulnerability to nature and physical damage by man, including a sniper attack in a California substation in 2013, has been repeatedly demonstrated. But it's the threat of cyberattack that keeps many of the most serious people up at night, including the US Department of Defense.

10. SUMMARY OF THE INVENTION. A primary object of the present invention is to provide a combination hammer and lumber manipulating tool that will overcome the shortcomings of the prior art devices.

Another object is to provide a combination hammer and lumber manipulating tool that eliminates the need to carry an additional tool to manipulate a piece of lumber.

An additional object is to provide a combination hammer and lumber manipulating tool that is approximately the same weight as a conventional hammer.

A further object is to provide a combination hammer and lumber manipulating tool that does not have any moving parts which can affect the character of the conventional hammer's strike.

Another object is to provide a combination hammer and lumber manipulating tool that reduces injuries to other workers attempting to manipulate a twisted piece of lumber with their hands.

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