

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
УМАНСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ САДІВНИЦТВА**

**Факультет економіки і підприємництва
Кафедра фінансів, банківської справи та страхування**

Методичні матеріали та вказівки для виконання контрольної роботи з навчальної дисципліни «Основи наукової комунікації іноземною мовою» для здобувачів вищої освіти другого (магістерського) рівня заочної форми навчання спеціальності 072 «фінанси, банківська справа та страхування»

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Методичні вказівки підготовлені викладачем Пономаренко О.В.

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Затверджено на засіданні кафедри фінансів, банківської справи та страхування (протокол №1 від 30.08.2021р.) та засіданні методичної ради факультету економіки і підприємництва (протокол №1 від 31.08.2021р.).

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Вступ

Мета та призначення контрольних робіт.

Дані методичні вказівки призначені для оптимізації процесу виконання контрольних робіт з курсу „Основи наукової комунікації іноземними мовами» студентами заочної форми навчання.

Контрольні роботи відіграють важливу роль в організації самостійної роботи студентів. Роботи містять завдання, що призначені для перевірки вміння використовувати знання з лексики, граматики, орфографії, синтаксису англійської мови, написання ділових листів, резюме, складати і перекладати ділові папери, аналізувати і перекладати тексти з наукової тематики.

Протягом вивчення дисципліни студенти виконують 4 контрольні роботи, кожна з яких складається з 2 варіантів.

Рекомендації щодо виконання контрольних робіт.

Контрольна робота 1. Складається з двох завдань. В першому завданні потрібно уважно ознайомитись із змістом запропонованих уривків із наукових та ділових паперів та поєднати їх із назвами. В другому завданні необхідно написати електронний лист на запропоновану тему, дотримуючись офіційного стилю та відповідної структури.

Контрольна робота 2. Складається з двох завдань. В першому завданні потрібно уважно ознайомитись із змістом запропонованих готових резюме та поєднати їх з назвами розділів. В другому завданні пропонується написати своє власне резюме, дотримуючись чіткої структури, офіційного стилю та правил.

Контрольна робота 3. Складається з двох завдань. В першому завданні потрібно уважно ознайомитись із змістом запропонованих ділових листів та доповнити їх необхідними лексичними одиницями, які відповідають контексту та граматичним особливостям. В другому завданні необхідно написати діловий лист, дотримуючись офіційного стилю, структури та правил.

Контрольна робота 4. Складається з трьох завдань. В першому завданні потрібно уважно ознайомитись із змістом запропонованих уривків з наукових та ділових текстів та обрати основну тему. В другому завданні необхідно написати есе, дотримуючись офіційного стилю, структури та правил. В третьому завданні реферувати запропоновані наукові тексти.

Виконання контрольних завдань та оформлення контрольних робіт

1. Кожне контрольне завдання у цих методичних вказівках пропонується до

виконання в двох варіантах . Ви маєте виконати один з двох варіантів на вибір.

2. Виконувати письмові контрольні роботи потрібно в окремому зошиті. На обкладинці зошита напишіть своє прізвище, групу, номер контрольної роботи та варіант. Вразі дистанційного навчання контрольна робота має бути виконана у форматі Word та надіслана на електронну пошту, виконавши умови підпису для ідентифікації виконувача.
3. Контрольні роботи мають виконуватися акуратно, чітким почерком. Під час виконання контрольної роботи залишайте в зошиті поля для зауважень рецензента.
4. Виконані контрольні роботи направляйте для перевірки в установлені терміни.
5. Якщо контрольна робота виконана не повністю чи без додержання вказівок, вона повертається для доопрацювання .
6. Під час виконання контрольних робіт, здобувачі повинні дотримуватися правил академічної доброчесності, які визначено Кодексом доброчесності Уманського НУС.

КОНТРОЛНА РАБОТА 1.

Check whether you can define the right type of business letters. Match each of the following extracts from business letters (1–11) with the type of letter (a–k) from which it is taken.

(VARIANT I)

TASK1.

a) letter of invitation	e) letter of apology	h) letter of inquiry
b) letter of rejection	f) letter of warning	i) order
c) letter of complaint	g) letter requesting payment	j) letter of application
d) response to an inquiry		k) reservation letter

1. Mr. Kazoulis would like a double room with shower and full board from 12 to 14 September inclusive.

2. I am extremely sorry about the incident last week during the visit of your representative to our offices. Unfortunately, ...

3. This is not the first time that this has happened and I must inform you that if it happens again, we shall be compelled to issue a formal reprimand to avoid happening this situation in the future.

4. I regret to inform you that your application for the post of Deputy Catering Manager has been unsuccessful. Thank you for...

5. Please find enclosed my CV and a recent photograph. I am looking forward to your reply.

6. I should be grateful if you would send me more information about your LK range of products including details of prices and discounts.

7. Thank you for your letter of 9 June. Please find enclosed a price list and full details of...

8. Please, would you send to the above address 37 units of product reference number 37/LK/45006 (brown) and dispatch the invoice to our West Central office in the usual way.

9. Kazoulis Communications would be pleased to welcome Udo Schmidt to the opening of its new...

10. With reference to outstanding invoice number 9602132/64, we should be grateful if you would settle the payment issue...

11. I wish to draw your attention to the very poor treatment our representative received when she called on you last week.

TASK 2

Write a letter to book a room in a hotel or a motel. The choice of a hotel,

terms of arrival and departure, names and addresses and any other details are your own.

(VARIANT II)

TASK1.

a) letter of invitation	e) letter of apology	i) order
b) recommendation letter	f) confirmation letter	j) letter of application
c) letter of complaint	g) order confirmation letter	k) reservation letter
d) response to an inquiry	h) resignation letter	

1. We would like to request a confirmation of the reservation as per details above.
2. Thank you for your inquiry of 12 September asking for the latest edition of our catalog.
3. I am writing to you in response to your advertisement for a Legal Assistant specializing in Port Regulatory Law, which appeared in the Seattle Times on Sunday, June 15.
4. It is an honor to be given the privilege to invite you to the (Home Decor Exhibit).
5. Please accept this letter as notification that I am leaving my position as Call Center Agent with Celcon Telecommunication Inc. on September 15.
6. I sincerely recommend Mr. Thomson for the scholarship as I feel he is the right candidate for that program.
7. We shall appreciate your shipping these goods so that they will reach us not later than August 25, billing them f.o.b. San Fernando, Pampanga, at 2/30, n/60 – your usual term.
8. I would like to confirm the placement of my order for 3 sets of the Nala Talking Dino Dolls which are priced at \$50 each, my bill having a total sum of \$150.
9. I would like to have this product immediately replaced with a working unit of the same brand or model within 3 days. If you cannot provide me with a replacement, I would like to return the unit I have and for you to refund my payment.
10. Further to our telephone conversation, I am writing to confirm our meeting on June 6, at 10:30 a.m. at the SM Corporate Office located at the 10th Floor of SM One E-comCenter, Harbor Drive, Mall of Asia Complex, Honolulu, HI. Elena Tronco, our Senior Manager, will be joining us.
11. We would like to thank you for informing us about the error on your credit card. We would like to express our sincerest apology for the accidental duplication of the service charge on your account.

TASK 2

Write an apology letter to a customer to deal with a case of very poor telephone company customer service. These letters must be sincere, or there is no point. It's unfortunate that more companies don't send such letters of apology to poorly served customers.

КОНТРОЛЬНА РОБОТА 2.

VARIANT I

TASK 1

Read the given below CV examples. Match section headings a-f to sections 1-6 in the CV:

- a) Education
- b) Additional personal skills
- c) Personal information
- d) Objective
- e) References
- f) Work experience

1. _____
Experienced and ambitious business professional seeking a challenging new project management role.

2. _____
First name: Tyler
Surname: Jones
Address: 4 Impasse Guéménée
Ile de France, Paris
Phone number: +33 1 53 09 20 21
Mobile: +33 735 68 00 42

3. _____
September 1999 – June 2000
Executive MBA, Graduate School of Business, Prague Principle studies included: Financial Accounting, Business Ethics and Public Policy, Risk Management, Economic Analysis for Managerial Decisions, Global Human Resource Management, IT and Business, Cost Management Strategies, Negotiating

September 1996 – June 2000

BA Economics and Law, University of Leicester, UK Modules studied: Economics

of Law, Constitutional and Administrative Law, Company Law, Macroeconomics, International Finance and Trade, Economics of Human Resources.

4. _

October 2006 – present

Project Director, GAS Holdings, Rue d’Alembert, Paris Responsible for designing and implementing projects for company development within central-Europe.

July 2001 – October 2006

Assistant Management Consultant, CM Training LTD, London Responsible for selection of new marketing suppliers.

August 2000 – July 2001

Entry Level Consultant, CM Training LTD, London

Responsible for the development of all competency based performance tools and responsible for the recruitment of internal candidates.

5. _

Languages spoken: French (C1 level, both speaking and writing), Czech (B2 for speaking, A2 for writing).

Advanced proficiency with the Microsoft Office Suite (Word, Excel, Outlook Express, PowerPoint, and Access).

European Driving license – clean.

6. _

Available upon request.

TASK2

Write down your own CV paying attention to the main rules of CV writing.

VARIANT II

TASK1

Read the given below CV examples. Match section headings a-f to sections 1-6 in the CV:

1. _____

PATRICIA HEPWORTH

12 Any Road, Anytown AN1 1CV

Telephone: 01632 960 739 (Home); 07700 900 709 (Mobile) E-mail:

patriciahepworth@example.com

2.

A dedicated and results-driven senior manager with a highly successful background in the achievement of profitable business growth through the

creation and execution of successful sales and marketing strategies. Experienced in working with leading brands in the competitive retail and automotive industries with the primary focus on exceeding expectations for customer service delivery while ensuring optimum brand impact. Possesses excellent interpersonal, communication and negotiation skills and the ability to develop and maintain mutually beneficial internal and external relationships. Enjoys being part of, as well as managing, motivating and training, a successful and productive team, and thrives in highly pressurized and challenging working environments.

3. 2005–2009 TYRES UK LTD

Freelance Consultant/Interim Network Development Manager

- Project managing the redevelopment of the retail sales strategy across the UK market with the ultimate aim of facilitating business performance improvements
- Successfully developing multi-channel solutions including instigating a new HiQ Fast Fit Franchise proposition
- Playing a pivotal role in the design and development of a class-leading B2C eBusiness website
- Working in close conjunction with external professionals to create and implement a retail network representation plan
- Actively involved in developing a new retail store concept and in redrafting all contractual agreements and process/procedure manuals
- Coordinating the pitch and scoping a process for the selection of a staff training and development academy

1999–2005 BDW GROUP

2005–2005 Managing Director, BDW Contact Ltd

- Fully accountable for the establishment and management of a new business arm specializing in the provision of telemarketing services requiring the development of an independent customer base
- Collaborating with professionals and third parties to set up the infrastructure for the company and coordinating the recruitment, selection, and training of 15 members of staff
- Planning and organizing a highly successful launch programme and driving the business forward to break-even three months ahead of projections
- Introducing a range of B2B and B2C services and facilitating the provision of 24-hour service by the business partnership in conjunction with an external agency

2000–2004 Operations Director

- Providing management and support to up to 68 members of staff and motivating them towards the achievement of optimum service delivery standards to facilitate customer satisfaction and maximum revenue generation
- Maintaining full profit and loss accountability up to £5 million while achieving a year-on-year growth in revenue of more than 10%
- Initiating half yearly service reviews with major blue chip, retail clients and formalizing account planning to ensure best practice resulting directly in recognition for excellence in customer surveys

- Developing and implementing new billing and forecasting systems which significantly improved overall efficiency
 - Enabling a 5% increase in actual gross margin in 1 year through the implementation of a staff incentive scheme
- 1999–2000 Account Director
- Working in close conjunction with key client representatives to develop marketing strategies and point-of-sale materials on behalf of retail partners

- Negotiating and securing £120,000 in bespoke systems development revenue and playing a key role in increasing monthly revenue from £12,000 to £100,000

1996–1999 WORDS PICTURES SOUNDS

Managing Director

- Setting up and developing a full-service design agency from the initial business planning, financial forecasting, and business strategy development through to building and retaining the customer base
- Successfully securing and effectively managing contracts with leading brands including Audi, One 2 One and Cadbury for the provision of a range of creative services including media creative, brochure design, corporate identity and hard point of sale
- Achieving approved supplied status with Audi and One 2 One and delivering sustained income growth with the turnover increasing from £75,000 in 1996 to £750,000 in 1999

1983–1996 VAG (UK) LTD

Audi A8 Project Manager

- Commencing employment as a Trainee Field Sales Manager on behalf of the sole importers of Volkswagen and Audi vehicles and parts into the UK
- Gaining a series of promotions through various product, marketing, operations, and advertising management positions, both head office and field based
- Ultimately undertaking the head office role of Audi A8 Project Manager tasked with the development and promotion of the brand and the vehicle within the luxury market with a total spend of £1.5 million

4. A Levels Mathematics, Economics, History, and General Studies
O Levels Including English and Mathematics

• Management Development Programme • Effective Management

- Marketing Management • Appraisal Training
- Presentation Skills • Team Building
- Finance for Non-financial Managers • Creativity Training

5. Key technical skills Word, Excel, Access, PowerPoint, Internet and E-mail Driving Licence Full/Clean

Health Excellent; non-smoker

Interests Squash, Golf, Reading (current affairs), Theatre and Cuisine

6.

Available upon request.

TASK2

Write down your own CV paying attention to the main rules of CV writing.

КОНТРОЛНА РОБОТА 3

VARIANT 1

TASK 1

Complete the letter using the words suggested:

(VARIANT I)

<i>to employ</i>	<i>a vacancy</i>	<i>to contribute</i>	<i>an academic qualification</i>
<i>to inquire</i>	<i>an ability</i>	<i>to look forward</i>	<i>staff performance</i>
<i>an opening</i>	<i>a budget</i>	<i>leading</i>	<i>a Project Manager</i>
<i>a position</i>	<i>the cost</i>	<i>a skill</i>	<i>a fit</i>

Major UK Company
123 Made Up Road
DE1 1AA, Derby

Date: 6th January 2018

Dear Sir / Madam,

I am writing to you to ¹..... about a ²..... in your companies London office for an IT ³..... I have been told of this ⁴..... by a Mr. Richard Brown who is currently ⁵..... by your company.

If the ⁶..... exists then I am very interested in it as I feel it is a perfect ⁷..... for my ⁸..... and ⁹..... I am currently working for a ¹⁰..... multinational company, where I have been successful in controlling ¹¹..... and ¹²....., improving ¹³..... and completing projects to time.

I ¹⁴..... to discussing my relevant work experience and ¹⁵..... with you and also explaining how I ¹⁶..... to your companies continued growth and success.

Please feel free to contact me if you require clarification or any further information. I thank you for your time and I look forward to hearing from you.

Yours sincerely,

Mark Thompson
128 Somewhere Road

Birmingham

TASK2

Write a suitable e-mail to deal with the described situation. Invent an address for the people or companies concerned.

Your business partner has arranged the meeting with a prospective customer and has invited you to participate in the meeting, but you are presently unable to come. Write to inform him of the situation and give your excuses.

Write 30-40 words.

VARIANT II

TASK1

Complete the letter using the words suggested:

<i>commencement services</i> <i>a graduation certificate</i> <i>identifying information</i>	<i>to steal</i> <i>unfortunately</i> <i>a claim</i>	<i>a report</i> <i>to cover</i> <i>a fee</i>	<i>to request</i> <i>to enclose</i>
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Major UK Company
123 Made Up Road
Derby
DE1 1AA

Date: 25th June 2018

Major UK Company 123 Made Up Road Derby
DE1 1AA
Date: 25th June 2018

Dear Sir / Madam:

I am writing to 1..... a copy of my 2 awarded in the spring 3 4, I lost the original when my briefcase 5

..... from my car. I 6 a copy of the police 7 to support my 8, along with a certified check for \$27.50 9 the replacement 10 My name and other 11 are included in the report. Please send the certificate to the address below. Thank you for your

assistance.

Yours sincerely, Mary Smith,
128 Somewhere Road Birmingham
B1 1AA

TASK2

Write a suitable e-mail to deal with the described situation. Invent an address for the people or companies concerned.

An accounts manager writes to you about the errors in a sales invoice you sent to them concerning the sale of 20 tables and chairs. They were billed for \$40,800. The correct amount is \$4,800.

Write 30-40 words

КОНТРОЛЬНА РОБОТА 4.

WRITING ESSAYS, GRANT PROPOSALS, PROJECT STATEMENTS

Рекомендації щодо виконання: прочитати тексти, визначити основну думку з запропонованих.

Choose the best topic sentence.

VARIANT I

TASK 1

My cousin Anita's experience is a good example. In September, she started working in a fastfood restaurant because she wanted extra money for her clothes. When she got her first paycheck for \$125, she was very happy. But the restaurant was hot, noisy and busy, and Anita worked very hard. Soon she was too tired to do homework at night, so she skipped classes. In December, she failed her math and English exams. In January, she dropped out of school.

- a) Getting a part time job is always a useful experience for a student.
- b) The students who wish to earn extra money usually get part time jobs.
- c) Finishing school is often difficult for students who work.
- d) The students who work are usually successful at school.

TASK2

Write an essay (100-150 words)

A lot of start-up businesses are plagued by certain legal matters. Name some of

these.

TASK 3

Annotate the following abstract. (200-250 words)

GOOGLE GLASS HAS ITS ELECTRONIC EYE ON HEALTH by Paul Marks

The experimental Google Glass headset has already inspired innovators to create applications that could bring big changes to healthcare. "SO, WHY are you wearing Google Glass?" I ask the man ahead of me in the coffee line at Ubicomp, a computing conference in Zurich, Switzerland. He responds enthusiastically that he is trying to work out how people with diabetes could use Glass's camera to recognise the nutritional value of the food they eat and use that to predict their glucose levels, helping them better cope with their condition. The wearer is Subrai Pai of the Georgia Institute of Technology in Atlanta, and his idea is just one of many healthcare applications for Glass. The camera-packing wireless eyepiece is also helping people to live with some of the problems of paralysis, blindness and deafness. And surgeons are eyeing Glass as a tool for improving surgery and medical education. Last month, Christopher Kaeding, a surgeon at Ohio State University in Columbus, strapped Glass on before performing a knee operation to repair a patient's anterior cruciate ligament. As he went through the procedure, colleagues across town were able to view the action from Kaeding's point of view – by virtue of a Google Hangouts online forum – and offer advice, while medical students in yet another location watched and learned. Beyond the operating theatre, Glass could be useful to people with sensory impairments. A blind person preparing to cook and wondering what's in a food tin could easily find out by taking a picture of the label and sending it, with a question, to crowd workers on Amazon's Mechanical Turk using a system developed by researchers at Carnegie Mellon University in Pittsburgh, Pennsylvania, and at the University of Maryland in Baltimore. "Back comes a result in seconds saying 'no, the can does not contain nuts'. Or 'flip the box around, you're looking at the wrong side'," says Thad Starner, of Georgia Tech, who is Google's technical lead for Glass. "This technology also helps with things you just don't even think about as a sighted person, like is there a rash on my baby's head?" Starner is also working with people with paralysis of all four limbs to see how Glass can help them. For instance, Glass makes a sound that is conducted through your cheekbone to signal the arrival of a text or email, which can be sent from your phone via Bluetooth or over Wi-Fi. A tilt of the user's head, or a wink, tells Glass's sensors to display the message. "They can then respond by voice and their words are sent to Google servers, converted to text and transmitted as SMS faster than their friends can text," says Starner. Starner tells of a quadriplegic woman who has been empowered by Glass to act as navigator and videographer on camping trips with friends – using Glass's heads-up, turn-by-turn satnav and its built-in camera. "Glass is reducing some of the barriers to such participation," he says. The aim of Pai's project is to let people with diabetes view all of their health

data in a simple Glass visualisation. "This could include data from insulin pumps, continuous glucose monitors, pedometers, heart-rate monitors and nutrition information from a food journal captured via Glass's camera," says Pai's colleague Nate Heintzman, who runs the project at the University of California, San Diego. He admits that the system is not yet ready to perform automated food-recognition but says that simply having data in one place will help users make better health decisions. The benefits extend to more than just those who live with impairments. For parents learning to communicate with deaf children, Georgia Tech researcher Kim Xu has developed SmartSign, an app demonstrated by Starner at UbiComp, that allows a child's hearing family to ask for the sign language of a particular word and have a short video "microlesson" on that subject streamed to the Glass screen. Google is not saying when Glass will become an affordable consumer product, but when it does, a raft of health applications await it. Sensors that measure heart arrhythmias are already being built into clothing by researchers like Lucy Dunne, a smart-textiles designer at the University of Minnesota in St Paul. It is likely that Glass will connect with such sensors to record and display their data. Despite the technical wizardry, the trickiest problem Google faces, says Dunne, is the same one that faces makers of all wearable technologies: making Glass into something that people actually want to wear. That will mean making Glass look a lot more attractive than its current uber-geeky look. "People want to look normal. So you have to innovate within subtle conformity restraints and aesthetics," she says. "Fashion is hard." The Glass 2.0 wish list Google Glass has a mic and camera, plus sensors for motion, orientation, proximity and eye winks, but a few more gizmos would really up its game. So says Bernard Kress of GoogleX, the lab in Mountain View, California, where Glass is being developed. Top of his wish list is adding a Kinect-style depth camera to allow Glass to recognise its wearer's gestures, such as finger clicks and hand waves, to activate functions like sharing pictures quickly online. But he says he is still waiting for depth cameras to miniaturise enough. Meanwhile, Japanese mobile network NTT DoCoMo has developed a way that a Glass-type headset could capture your face for video calls. Using four tiny fisheye video-camera lenses aimed at a user's face from the headset's edges, four distorted images of your face can be captured, corrected and stitched together to create a fullmotion selfie to be transmitted with your voice. Kai Kunze at Osaka Prefecture University in Japan hopes Glass 2.0 comes with a gaze-tracking sensor. He has created an algorithm that logs your reading habits by watching for eye-movement patterns that differ when reading comics, newspapers, fashion magazines, textbooks or novels. It tots up your intake and warns you if you read too much junk. (27 September 2013 New Scientist www.newscientist.com)

VARIANT II

TASK 1

Last weekend, for example, dozens of people had picnics on Harris Beach. They brought a lot of food and many cans of soda and had a good time eating

and drinking and playing in the water. The picknickers put some of their trash in the containers in the park, but they also left a lot of it on the ground. In the evening, a seagull got tangled in a plastic bag and suffocated to death. At night, a racoon put its paw in an open soda can and cut its leg badly. It died in the morning.

- a) Harris Beach is an ideal place for people to have picnics.
- b) Picknickers don't always put their trash away.
- c) Harris Beach is the natural habitat of different species of animals.
- d) Trash left on picnic areas injures and kills wildlife.

TASK 2

Write an essay (100-150 words)

Can companies legally hide or withhold information that might potentially damage their reputation or image, particularly from customers?

TASK3.

CARBON NANOTUBES ON A SPIDER SILK SCAFFOLD by Eden Steven, Wasan R. Saleh, Victor Lebedev, Steve F. A. Acquah, Vladimir Laukhin, Rufina G. Alamo & James S. Brooks

The immense demand for electronics, and thus the electronic waste and environmental pollution it generates, poses a growing problem that will require innovative solutions¹. Many toxic elements and non-biodegradable plastics are commonly found in conventional electronics, and efforts to develop new eco-friendly electronic designs are therefore desirable. Incorporation of natural materials into these designs is advantageous to reduce the quantity of toxic components of the electronic devices. Moreover, natural materials often possess complex and robust physical properties that can be harnessed for electrical and sensor applications. Spider silk (SS) is one such material and the combination of its toughness and biocompatibility makes the material strategically important for implant, electrical, sensor and actuating applications. SS, a protein-based natural polymer, is a flexible but strong material due to its helical-elastic and β -sheet crystalline composition. An unrestrained neat SS fibre expands in both length and diameter when humidified up to ~70 or 80% relative humidity (RH). At higher RH, the fibre experiences supercontraction, where it shrinks in length, expands in diameter and becomes soft. This fibre shrinkage is typically an irreversible process. The fibre softening, however, is a reversible process. In addition, the fibre also experiences cyclic contraction, a phenomenon different from supercontraction, where the fibre extends when exposed to a high-humidity environment. These factors are key to the work presented here. For technological applications, where constant strength and

flexibility in a variable environment are desired, supercontraction may be regarded as a problem. However, both supercontraction and cyclic contraction can be exploited for actuating applications. For example, it has been shown that SS fibres can be used as a biomimetic muscle with an exceptional work density, 50 times higher than other biological muscle fibres, estimated to be capable of lifting a 5 kg mass with a 1mm thick SS fibre. SS fibres can also be used as contactor shadow masks during thin film deposition, generating micro-or nano patterned features without lithographic processing. Moreover, starting from its intrinsic properties, SS fibres can serve as a versatile scaffold upon which additional functions can be built. For example, CdTe, magnetite and gold nanoparticles can be used to functionalise SS for fluorescent, magnetic and electronic applications, respectively. Gold-functionalised fibres (Au-SS) have been shown to be electrically robust down to cryogenic temperatures. Even though Au-SS possesses sufficient flexibility for use as electrodes in microelectronics, generally its elasticity and electrical continuity are not adequate for electronic sensors or actuating devices. Here we show that supercontraction, and in particular, silk fibre softening, provides a simple and effective route of SS functionalisation with carbon nanotubes (CNTs), enabling use in electronic applications including sensors and actuating 44 devices. We report a strong affinity for amine-functionalised multiwall CNTs (fCNTs) to adhere to natural *Nephila clavipes* SS fibres. Adhesion is facilitated by water and mechanical shear, and enhanced by polar interactions and bonding between the SS and f-CNT side groups. The process results in SS fibres uniformly coated with f-CNTs (f-CNT-SS) providing an electrically conducting path, and thereby a selfmonitoring mechanism for physical changes and/or stimuli to the f-CNT-SS structure. The f-CNT-SS fibres are ~300% tougher than neat silk fibre, versatile and multifunctional, and exhibit polar shapeable, conducting, flexible, strain- and humidity-sensitive properties. Proof-of-concept f-CNT-SS-based heart pulse sensor and current-driven actuator devices are demonstrated. Results WATER-BASED F-CNT COATING OF SS FIBRES We discovered that by mixing a bundle of dragline SS fibres .

We have also performed a control experiment involving pre-supercontracted fibres. The neat fibres are first immersed in a water bath for 30 min, followed by air drying, and then the water-based f-CNT coating is performed. The water-based procedure is also effective on these pre-supercontracted fibres, indicating that the initial shrinkage of silk fibre is not the most important factor to achieve the effective coating, but it is the softening of the fibre during supercontraction.

We note that a dry powder of pure multiwall CNTs (MWCNTs) does not provide effective initial dispersion and adhesion to the SS fibre (Supplementary Fig. S3). As a result, it is not possible to coat the SS fibre with pure MWCNTs using our water-based method. Likewise, only SS fibres exhibit an effective f-CNT coating compared with nylon, polyester, cotton and some acrylic fibres where either spotty or

no coating was observed. Unlike water, other solvents such as hexane, toluene, methanol, ethanol, acetone, dichloromethane and dimethylsulphoxide do not

facilitate
a uniform coating.

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Abridged

Теоретичні посилання..

Діловий лист. Структура.

1. *Inside address (name and address of the person or company receiving it).*
2. *Heading (writer's address, date of the letter).*
3. *Greeting/salutation (Dear Sir/Madam).*
4. *The body of the letter (reference, information, purpose, conclusion).*
5. *Enclosure / attachment (if any documents are enclosed).*
6. *Closing or complimentary close (saying goodbye).*
7. *Signature.*

ТЕОРЕТИЧНІ ЗАСАДИ АНОТУВАННЯ ТА РЕФЕРУВАННЯ

Анотування та реферування належать до аналітико-синтетичних процесів, сутність яких полягає в інформаційній компресії певного документу, що дозволяє отримувати вторинну інформацію у вигляді відповідно анотації та реферату.

Анотація та реферат як результати аналітико-синтетичної обробки первинних документів широко розповсюджені в бібліографічній, видавничій, інформаційно-аналітичній та науково-інформаційній діяльності. У кожній зі сфер діяльності поняття «анотація» та «реферат» мають децю відмінні трактування, існують також характерні особливості укладання анотацій та рефератів залежно від їх мети, цільового призначення, типу та жанру документа, що підлягає анотуванню та/або реферуванню. Незважаючи на наведені розбіжності, вважають за доречне вивчати теоретичні та методологічні засади анотування та реферування з позицій загальної теорії бібліографії, яка поєднує всі аналітико-синтетичні процеси вироблення бібліографічної інформації.

Структура анотацій

Як правило, анотація складається з трьох частин:

1. *вступна частина – бібліографічний опис, який поєднує назву періоджерела, прізвище та ім'я автора мовою оригіналу, назву видання (журналу або книги), видавництво, рік, місяць, номер видання, сторінки, мову публікації;*
2. *основна частина – описова – містить перелік основних проблем і положень оригіналу та дуже стисло характеристику матеріалу публікації;*
3. *заключна частина – завершальна – розкриває стисло характеристику призначення періоджерела, посилання на бібліографію та кількість рисунків тощо*

Загальні вимоги до написання анотацій

1. *Урахування призначення анотації. Від цього залежить повнота охоплення та зміст заключної частини.*
2. *Обсяг анотації. Обсяг залежить від значимості анованого матеріалу, його особливостей та призначення; коливається від 500–2000 друкованих знаків.*

3. *Дотримання логічності структури, яка може відрізнятися від порядку викладання в оригіналі.*
4. *Дотримання мовних особливостей анотації, що поєднує наступне:*
- *виклад основних положень оригіналу ясно та стисло;*
 - *уникнення повторів;*
 - *виконання правил єдності термінів та скорочень;*
 - *використання загальносприйнятих скорочень;*
- *уникання використання прикметників, прислівників, вставних слів, які не впливають на зміст;*
- *вживання деяких узагальнюючих слів та словосполучень, які демонструють логічні зв'язки між окремими частинами висловлень.*

WORD BANK

1. abstract (annotation) – анотація
2. adult education – освіта для дорослих
3. all-rounder – різностороння людина
4. alumnus (alumni) – випускник (випускники)
5. aim (purpose) – мета
6. carrier – кар'єра
7. conclusion – висновок
8. conference – конференція
9. contents – зміст
10. collective work – колективна робота
11. creative activity – творча робота
12. defect (deficiency, drawback, shortcoming, fault) – недолік
13. discipline – дисципліна
14. discussion – дискусія
15. educative activities – навчальна діяльність
16. emotional problems – емоційні проблеми
17. essay – есе
18. essence – сутність
19. essential qualities – основні якості
20. Fundamentals of Scientific Communication in Foreign Language – основи наукової комунікації іноземною мовою
21. identity formation (formation of the personality, development of a person, development of the personality) – становлення особистості
22. image of a leader (manager) – образ керівника (менеджера)
- 19
23. in-class work – аудиторна діяльність
24. independent work – самостійна робота
25. individual conversation – індивідуальна бесіда
26. in-service training – курси підвищення кваліфікації
27. an intensive course – інтенсивний курс
28. interactive methods – інтерактивні методи
29. introduction – вступ
30. management – керівництво, управління, адміністрація
31. manager – менеджер, керівник, адміністратор
32. manuscript body – основна частина
33. master – магістр
34. master's degree – ступінь магістра
35. master's work – магістерська робота
36. mental problems – розумові (психічні) проблеми
37. to meet the requirements – відповідати вимогам
38. merit – недолік
39. modern education – сучасна освіта
40. modern society – сучасне суспільство
41. module teaching – модульне навчання
42. motivation – мотивація
43. an online course (distant learning/education)– дистанційна освіта
44. optimal student (college) age – оптимальний студентський вік
45. out-of- class work – позааудиторна діяльність
46. paper – реферат
47. point – суть (to the point – по суті, off the point – не по суті)
48. position of manager (leadership/management position)– посада керівника, керуючого
49. post of chief – посада керівника
50. postgraduate – аспірант
51. postgraduate studies – аспірантура

52. presentation – презентація
53. Professional Communication in Foreign Language – професійна комунікація іноземною мовою
54. professionally-oriented teaching – фахове/ професійно-орієнтоване навчання
55. promotion – просування, заохочення, підтримка
- 56 rank – ранг, звання
57. recognized managers – видатні менеджери
58. references – список використаних джерел
59. report – звіт, доповідь
60. results – результати
61. role play – рольова гра
62. role situation – рольова ситуація
63. round table – круглий стіл
64. scientific work – наукова робота
65. self-esteem – самооцінка
66. source – джерело
67. state establishment – навчальний заклад
68. structure – структура
69. subordinates – підлеглі
70. successful leader (manager) – успішний керівник (менеджер)
71. to summarize (summary) – робити підсумки (підсумки)
72. tables (appendix) – додатки
73. thesis, dissertation – теза, дисертація
74. Title Page – титульна сторінка
75. topical issues – актуальні питання (проблеми)
76. top-manager – топ-менеджер
77. training technologies – тренінгові технології
78. to update knowledge – поновити знання
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79. urgent (actual, acute, burning, crucial) problems (questions) – нагальні питання
80. vocational course – професійний курс
81. vocational training – професійна підготовка
82. ways of motivation – засоби мотивації

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Для нотаток.

