ISSN 2181-

INFORMATIKA - ZAMONAVIY KASBLAR ASOSI

Angor tuman 1-son Politexnikumi
Informatika va axborot
texnologiyalari fani o`qituvchisi
AXMEDOV ALIJON ABDURASHIDOVICH

ANNOTATSIYA

Ushbu maqolada texnikum va kasb-hunar maktablarida tahsil olayotgan o‘quvchilar uchun informatika fanining ahamiyati yoritilgan. Maqolada informatikaning asosiy yo‘nalishlari-dasturlash, kompyuter tarmoqlari, axborot xavfsizligi, ma’lumotlar bazasi, sun’iy intellekt kabi sohalar haqida tushuncha berilgan. Shuningdek, informatikaning amaliy hayotdagi o‘rni, ish topish imkoniyatlari, frilans va masofaviy ishlar, raqamli savodxonlik va zamonaviy dasturlar bilan ishlash bo‘yicha foydali ma’lumotlar keltirilgan. Maqola o‘quvchilarni zamonaviy texnologiyalarni chuqur o‘rganishga va o‘z ustida muntazam ishlashga undaydi.

KALIT SO‘ZLAR

Informatika, texnikum, kasb-hunar, dasturlash, tarmoq, axborot xavfsizligi, sun’iy intellekt, raqamli savodxonlik, IT ko‘nikmalar, frilans, ma’lumotlar bazasi, zamonaviy dasturiy ta'minot.

KIRISH

XXI asr – bu raqamli texnologiyalar asri. Bugungi kunda deyarli har bir kasb, har bir soha kompyuter va internet texnologiyalariga bog‘liq. Ayniqsa texnikum va kollej darajasida tahsil olayotgan o‘quvchilar uchun **informatika** fani hayotiy zarurat darajasiga ko‘tarilmoqda. Endilikda informatika faqat kompyuterni yoqish va Word dasturida yozish emas, balki dunyo bilan hamnafas yashash vositasidir.

Informatikaning asosiy maqsadi va yo‘nalishlari

Informatika — bu **axborotni yig‘ish, saqlash, qayta ishlash va uzatish jarayonlari**ni o‘rganadigan fan. Bu fan quyidagi yo‘nalishlarni o‘z ichiga oladi:

1. **Dasturlash**

Python, C++, Java kabi tillar yordamida turli dasturlar yaratish.

Mobil ilovalar, veb-saytlar, avtomatlashtirish dasturlarini ishlab chiqish.

2. **Kompyuter tarmoqlari**

Mahalliy tarmoqlar (LAN) va internet orqali axborot almashinuvi.

Wi-Fi, server va routerlar bilan ishlash ko‘nikmalari.

3. **Axborot xavfsizligi**

Parollarni himoyalash, ma’lumotlar shifrlash, firibgarlikdan saqlanish.

Antiviruslar, fayrvol (firewall), ikki bosqichli autentifikatsiya.

4. **Ma’lumotlar bazasi (Database)**

Axborotni tizimli saqlash (MySQL, MS Access).

Katta hajmdagi ma’lumotlar ustida tezkor ishlov berish.

5. **Sun’iy intellekt va robototexnika**

Mashinalarni o‘rganishga o‘rgatish.

Oddiy robotlar yaratish, Arduino va Raspberry Pi bilan ishlash.

Texnikum o‘quvchisi uchun informatikaning ahamiyati

1. **Amaliy hayotda kerak bo‘lishi**

Elektrik, mexanik, quruvchi yoki agronom bo‘lishingizdan qat'i nazar, har bir sohada kompyuterlashtirilgan tizimlar mavjud.

Masalan, zamonaviy texnik xizmat ko‘rsatish markazlarida avtomobillar diagnostikasi kompyuter dasturlari yordamida amalga oshiriladi.

2. **Ishga joylashish imkoniyatlari**

Bugungi kunda IT yo‘nalishlari eng talabgir kasblardandir: veb-dasturchi, tizim administrator, grafik dizayner, kibermuhandis, SMM mutaxassisi.

IT bo‘yicha bilimga ega bitiruvchilar turli tashkilotlarga osongina ishga kirishlari mumkin.

3. **Frilans va masofaviy ishlar**

Uyda turib, grafik dizayn, web dasturlash, tarjima va texnik yordam xizmatlarini bajarish mumkin.

Saytlar: Upwork, Freelancer, Kwork, Fiverr orqali ishlash imkoniyati mavjud.

Zamonaviy dasturiy ta'minotlar va texnologiyalar

Texnikumda o‘qiyotgan har bir talaba quyidagi dasturlar bilan ishlashni bilishi zarur.

Dastur	Maqsadi
MS Word, Excel, PowerPoint	Matn tahriri, jadval ishlash, taqdimot
AutoCAD, SolidWorks	Muhandislik chizmalari va 3D modellashtirish
Photoshop, CorelDraw	Grafik dizayn va rasm tahriri
Visual Studio, PyCharm	Dasturlash muhiti
Cisco Packet Tracer	Tarmoq simulyatsiyasi (kompyuter tarmoqlari)

Raqamli savodxonlik va kibersavodxonlik

Informatikani o‘rganishda faqat texnik bilimlar emas, balki **axborot madaniyati**, **internet etikasi** va **kibersavodxonlik** ham muhim o‘rin tutadi:

- Internetda yolg‘on xabarlardan (feyk) saqlanish.
- Shaxsiy ma’lumotlarni (JSHR, parol) himoya qilish.
- Zararli sayt va dasturlardan ehtiyot bo‘lish.
- Internet orqali huquqbuzarlik qilmaslik (mualliflik huquqi, noqonuniy kontent).

XULOSA

Texnikum talabalari uchun informatika–bu nafaqat darslikdagi fan, balki zamonaviy hayotda, kasbda, ijodda, biznesda foydali vositadir. Bu fanni chuqur o‘rganish orqali siz:

- Bozorda raqobatbardosh mutaxassisga aylanasiz.

• O‘z loyihalaringizni yaratishingiz mumkin (ilova, sayt, elektron tizim).

• Zamonaviy texnologiyalarni o‘zlashtirib, bilimli, savodli va yetuk yosh bo‘lib ulg‘ayasiz.

Shu sababli texnikumda informatika faniga jiddiy e’tibor bering, amaliy mashg‘ulotlarda faol qatnashing va doimiy ravishda o‘zingizni rivojlantirib boring.

FOYDALANILGAN ADABIYOTLAR

1. Karimov, I.A. Yuksak ma’naviyat — yengilmas kuch. — Toshkent: Ma’naviyat, 2008.

2. G’aybullayev A., G‘ulomov S. Informatika va axborot texnologiyalari. — Toshkent: “Fan va texnologiya”, 2020.

3. https://www.w3schools.com – Dasturlash asoslari bo‘yicha interaktiv portal.

4. https://cybersecurityguide.org – Axborot xavfsizligi va raqamli madaniyat haqida global qo‘llanma.

5. O‘zbekiston Respublikasi Prezidentining 2020-yil 28-oktabrdagi PQ–4884-son qarori – “Raqamli O‘zbekiston — 2030” strategiyasi.

INFORMATICS — THE FOUNDATION OF MODERN PROFESSIONS

ANNOTATION

This article explores the growing importance of informatics for vocational college students in the digital era. It highlights the main branches of informatics, such as programming, computer networks, cybersecurity, databases, and artificial intelligence. The article emphasizes how informatics contributes to practical skills, job opportunities, freelance work, and digital literacy. It also discusses the essential software tools that students should master and the importance of cyber awareness. The article concludes by encouraging students to actively engage with the subject to build a successful professional future.

ISSN 2181-

KEYWORDS

Informatics, vocational education, programming, computer networks, cybersecurity, artificial intelligence, digital literacy, IT skills, freelance, databases, software tools, student development.

INTRODUCTION

The 21st century is the era of digital technologies. Today, almost every profession and field is connected to computers and the internet. Especially for students studying at vocational colleges, the subject of **informatics** has become an essential necessity. Informatics today is not just about turning on a computer or typing in Word — it is a vital tool for keeping up with the modern world.

The Main Goals and Branches of Informatics

Informatics is the science of **collecting, storing, processing, and transmitting information**. It includes the following major areas:

Programming

Creating various types of software using languages like Python, C++, Java.

Developing mobile apps, websites, and automation tools.

Computer Networks

Organizing data exchange via local (LAN) and global networks (Internet).

Working with Wi-Fi, servers, routers, and network configurations.

Cybersecurity

Protecting data using passwords, encryption, and secure protocols.

Utilizing antivirus software, firewalls, and two-step verification.

Databases

Systematically storing and managing data using tools like MySQL, MS Access.

Efficiently processing large datasets.

Artificial Intelligence and Robotics

Teaching machines to learn and make decisions.

Building simple robots using Arduino and Raspberry Pi platforms.

Why Informatics is Important for Vocational College Students

Applicable to Real Life

Whether you become an electrician, mechanic, builder, or agronomist — every profession now uses computer-based systems.

For example, diagnosing cars in modern service centers is done with software.

Better Career Opportunities

IT-related fields are among the most in-demand today: web developers, system admins, graphic designers, cyber engineers, and SMM specialists.

Graduates with strong IT skills are more competitive in the job market.

Freelance and Remote Work

You can work from home doing graphic design, web development, technical support, etc.

Popular freelance platforms include Upwork, Freelancer, Fiverr, and Kwork.

Popular Software and Technologies to Learn

Every vocational college student should be familiar with the following tools:

Software	Purpose
MS Word, Excel, PowerPoint	Word processing, spreadsheets, and presentations
AutoCAD, SolidWorks	Engineering design and 3D modeling
Photoshop, CorelDraw	Graphic design and photo editing
Visual Studio, PyCharm	Programming environments
Cisco Packet Tracer	Network simulation and design

Digital Literacy and Cyber Awareness

Informatics isn't only about technical knowledge — it also includes **information culture, internet ethics, and cyber awareness**:

- Avoiding fake news and misinformation online.
- Protecting personal data (like ID numbers, passwords).
- Being cautious with suspicious websites and downloads.
- Following laws regarding copyright and online content.

CONCLUSION

For vocational students, informatics is more than just a school subject — it's a powerful tool for success in life, career, and creativity. By learning informatics deeply, you can:

- Become a competitive professional in your field.
- Create your own projects (apps, websites, digital systems).
- Embrace technology and become a digitally literate, capable young person.

Therefore, take your informatics lessons seriously, be active in practical sessions, and keep improving yourself continuously.

REFERENCES

1. Karimov, I.A. ***High Spirituality is an Invincible Force***. — Tashkent: Ma'naviyat, 2008.

2. G'aybullayev, A., G'ulomov, S. ***Informatics and Information Technologies***. — Tashkent: "Science and Technology" Publishing, 2020.

3. W3Schools. (n.d.). ***Online tutorials for programming and web development***. Retrieved from https://www.w3schools.com

4. Cybersecurity Guide. (n.d.). ***Global resource for cybersecurity education and awareness***. Retrieved from https://cybersecurityguide.org

5. Presidential Decree of the Republic of Uzbekistan No. PQ–4884, dated October 28, 2020 — ***"Digital Uzbekistan – 2030" Strategy***.