ПОЛИТЕХ

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Введение в профессиональную деятельность

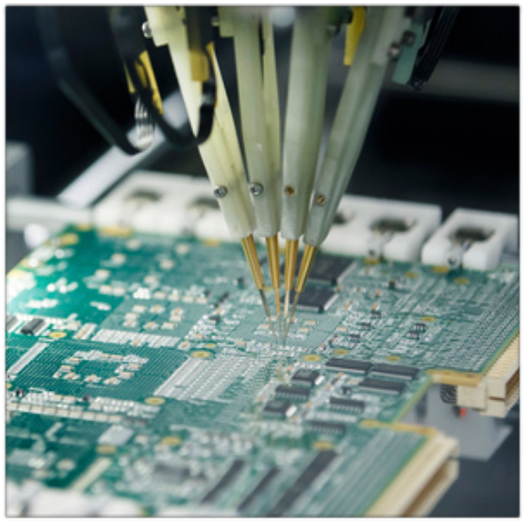
Константин Кориков | весна 2019

Агенда

1. О чём курс?
2. Как получить зачёт?

ПОЛИТЕХ

программа курса



Кем работать после университета: обзор рынка труда

Что значит быть инженером

Чему научит университет: обзор учебных планов

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qolwkn

Введение в профессиональную деятельность

classroom.google.com

WHAT IS VISUAL LITERACY? AND DO I HAVE IT?

From the earliest days of our education, we are taught literacy skills. Most fundamentally, we are taught to read and write. As we get older, we're also taught literacies like computer literacy, information literacy, and financial literacy. Being literate in something means to be knowledgeable and competent, to know the fundamentals first and foremost. But as we learn more complex topics, vocabularies, and processes, we are said to be "more" literate in something.

Two interesting anecdotes are important to consider when we talk about what it means to be visually literate. Chemist Roald Hoffman, in his book The Same and Not the Same, stated that his ability (and he implies other scientists' ability in this statement as well) to "draw a face so that it looks like a face atrophied at age ten" (69). Pause and reflect on that for a moment. Can you (or most people you know) draw any better than a ten-year-old? Why do you think that is?

The other anecdote comes from popular author Daniel Pink, who recounts a time when he visited elementary schools and asked young kids if they were artists. In kindergarten, without fail, when asked who was an artist, nearly every child would consistently raise their hands. But as children got older, the number of self-proclaimed artists would slowly drop; by sixth grade, only one or two students would raise their hands. If this anecdote is any reflection on our culture, it suggests students are either too removed from artistic development in school by twelve years old, or they are too embarrassed to admit that they like art. Either way, the result is the same: most people, after elementary school, don't develop literacy skills in visual communication and design.

If we put this into perspective, it means that, despite living in a visually saturated world—where it has been said that we view between 3,000 and 20,000 visual messages per day—most grown adults don't know which colors affect which emotions, how lines affect interpretation of statistics, what visual cues make them feel like a product is expensive, or what is most likely to grab their attention on a billboard. In other words, unless someone has a degree in art or design, they are often less likely to be aware of how to persuade others and, even more scary, they are often unaware of how they are being persuaded.

Eric Malm
MA 198
Homework #1
09/03/2004

Rudin 3.5, Saff and Snider 1.5.11, 1.7.5ad,
Dummit and Foote 1.1.25, Logan 1.8.6

Rudin 3.5 For any two real sequences $\{a_n\}, \{b_n\}$, prove that

$$\limsup_{n\to\infty}(a_n + b_n) \leq \limsup_{n\to\infty} a_n + \limsup_{n\to\infty} b_n,$$

provided the sum on the right is not of the form $\infty - \infty$.

Suppose that $\limsup_{n\to\infty} a_n + \limsup_{n\to\infty} b_n \neq \infty - \infty$, so that this sum is determinate. Define

$$A_n = \sup_{k\geq n} a_n, \quad B_n = \sup_{k\geq n} b_n, \quad \text{and} \quad C_n = \sup_{k\geq n}(a_n + b_n).$$

We first show that $C_n \leq A_n + B_n$ for all n. For k and n such that $k \geq n$, we have that $a_k \leq A_n$ and $b_k \leq B_n$. Then $a_k + b_k \leq A_n + B_n$ for all $k \geq n$, so $C_n = \sup_{k\geq n}(a_n + b_n) \leq A_n + B_n$. Thus, using the alternate definition of the lim sup, we have

$$\begin{aligned}\limsup_{n\to\infty}(a_n + b_n) &= \lim_{n\to\infty} C_n \\ &\leq \lim_{n\to\infty}(A_n + B_n) = \lim_{n\to\infty} A_n + \lim_{n\to\infty} B_n = \limsup_{n\to\infty} a_n + \limsup_{n\to\infty} b_n.\end{aligned}$$

∎

SS 1.5.11 Solve the equation $(z+1)^5 = z^5$.

Taking fifth roots of the equation yields

$$z + 1 = ze^{k\frac{2\pi}{5}},$$

where $k \in \mathbb{Z}$. We note that $k = 0$ (and all other multiples of 5) yields $z + 1 = z$, which reduces to $1 = 0$, an inconsistent equation. Isolating z, we therefore have the solutions

$$\boxed{z = \frac{1}{e^{k\frac{2\pi}{5}} - 1},}$$

with four unique solutions obtained using $k = 1, 2, 3, 4$. We expect 4 unique solutions because $(z+1)^5 - z^5$ is a fourth-degree polynomial. ∎

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www.spbstu.ru/education/students/description-of-educational-programs/

11.03.02	Инфокоммуникационные технологии и системы связи	Высшее образование - бакалавриат	11.03.02_01 Системы мобильной связи	Очная	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прие
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				Заочная				
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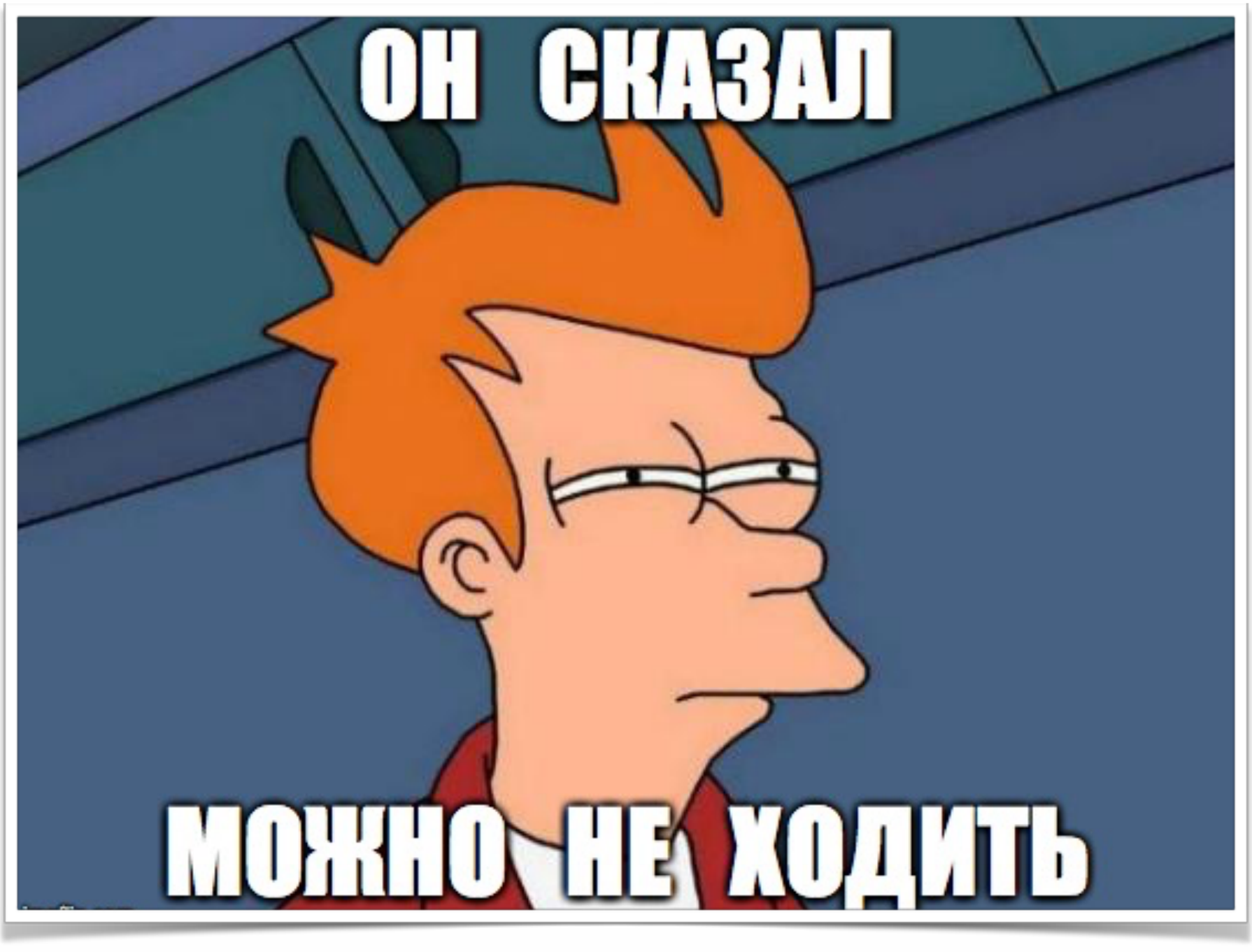
				Заочная	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прием 2018 года прием 2017 года прием 2016 года прием 2015 года	прие прие прие прие


ОН СКАЗАЛ
МОЖНО НЕ ХОДИТЬ

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