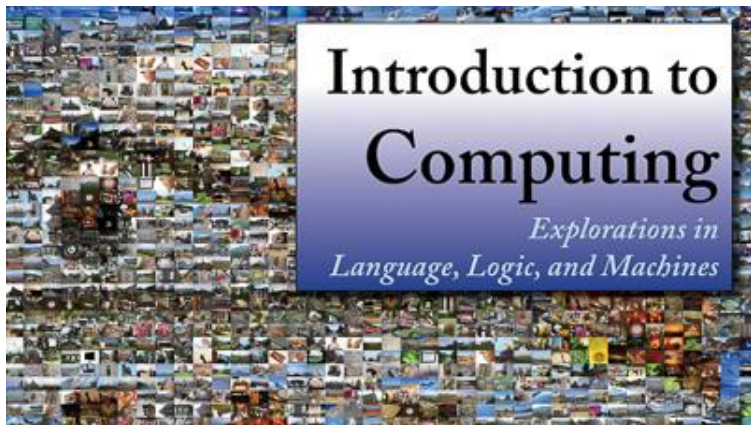


Computer Science?

Science, Engineering and Liberal Arts

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Science

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- ▶ Newton's law of universal gravitation

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- ▶ Newton's law of universal gravitation
- ▶ Science deals with real **physical** things

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- ▶ Computer Science is like mathematics to traditional science
- ▶ The studying of computing abstract things is not a natural science

Engineering

*Whereas science is **analytic** in that it strives to understand nature, or what is, engineering is **synthetic** in that it strives to create. Our own favorite description of what engineers do is “design under constraint”.*

~ William Wulf and George Fisher

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- ▶ Computer Science do deal with constraints (the capacity of the human mind)
- ▶ To deal with **complexity**, **abstractions** are used

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- ▶ Illiberal Arts are arts pursued for economic purposes (medicine and carpentry)
- ▶ Liberal Arts are for people who did not need to make a living (purely intellectual activities)

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- ▶ Music: “application of the theory of number”

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- ▶ Rhetoric: “the art of communicating thought from one mind to another, the adaptation of language to circumstance”
- ▶ Logic “the art of thinking”

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- ▶ Geometry: “theory of space”
- ▶ Music: “application of the theory of number”
- ▶ Astronomy: “application of the theory of space”

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Programming Languages and protocols

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- ▶ Geometry: Computer graphics
- ▶ Music: harmonic structures have strong connections
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- ▶ Astronomy: Not so much :)

Conclusion

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- ▶ Will that change the research philosophy?

Thank you!

