



# **Software Estimation Challenge**

**April 15, 2023**

**Preliminary  
Call for Students Participation**



# Students Teams Rewards

- ✓ 1<sup>st</sup> prize: 500 Euros
- ✓ 2<sup>nd</sup> prize: 300 Euros
- ✓ 3<sup>rd</sup> prize: 200 Euros



# Estimation Challenge Inputs

1. A set of detailed functional requirements.
2. A set of functional requirements at unspecified levels of completeness.
3. Some non-functional requirements (NFR).
4. Description of a development environment.
5. A data set with historical data on development productivity.



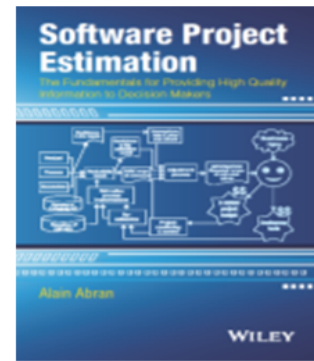
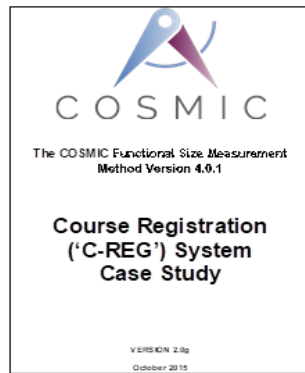
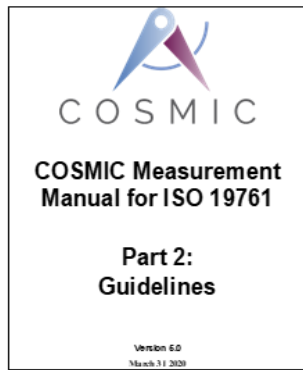
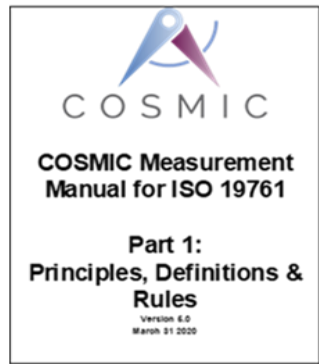
# Estimation Challenge tasks

Using the Challenge 'case study':

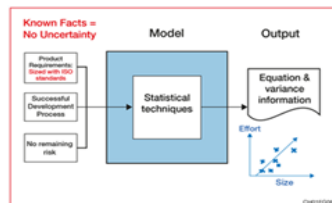
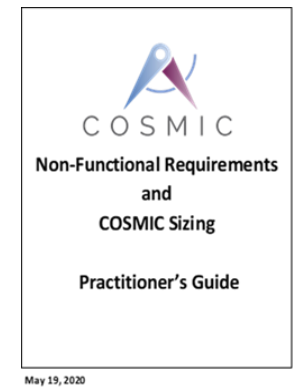
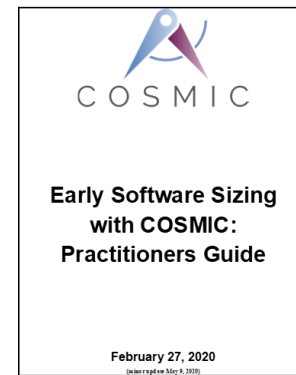
1. Size with COSMIC the detailed functional requirements.
2. Approximate the size of other functional requirements.
3. Size the non-functional requirements allocated to software functions.
4. Develop an estimation model from historical data provided.
5. Estimate the effort to develop both functional & non-functional requirements.



# Challenge Useful resources



Chapters 5, 6 & 9

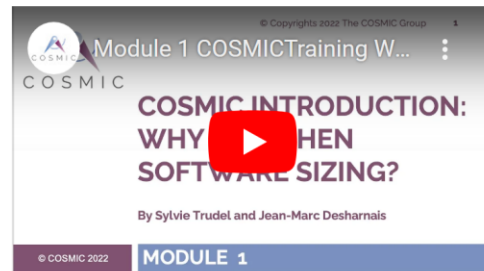




# YouTube Training Material

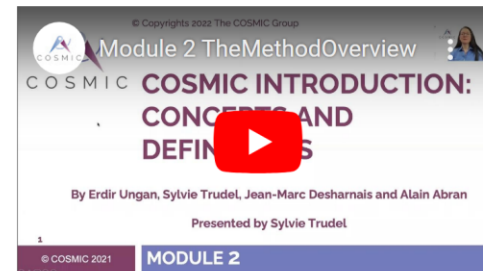
Learn the essentials of the COSMIC software sizing methodology from these videos produced in English and French.

<https://cosmic-sizing.org/videos/>

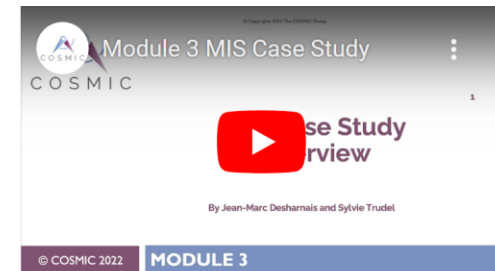


Training Module 1 – Why Measure Software Size

[Module 1 Slides](#)



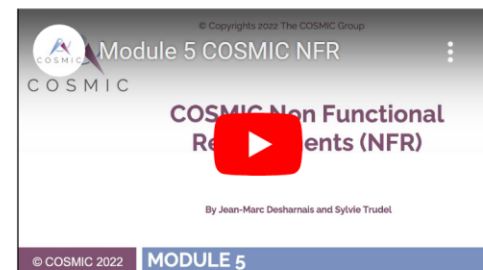
Training Module 2 – The Method Overview



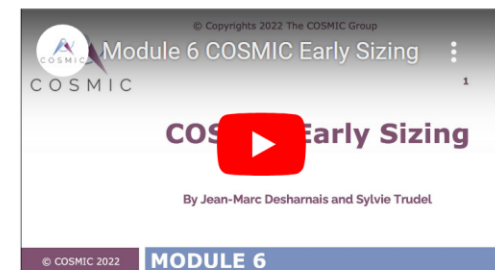
Training Module 3 – MIS Case Study



Training Module 4 – Realtime Software Case Study



Training Module 5 – Non-Functional Requirements



Training Module 6 – Early COSMIC Sizing



## More Training Material

- **Module 7: Estimation process in software engineering (slides):** [Module 7: Estimation process in software engineering \(slides\) - Cosmic Sizing \(cosmic-sizing.org\)](https://www.cosmic-sizing.org/module-7-estimation-process-in-software-engineering-slides)
- Tutorial on Early Sizing techniques (Powerpoints)



## Students feedback from 2022 Challenge

- *“.. an extraordinary experience for me. It was an instructive and entertaining activity and reinforcing work; thank you very much.”*
- *“... un working together with friends.”*
- *“.. a different and unique experience.”*
- *“Thanks to our professors, we became aware of this COSMIC challenge and participated in the challenge. It was beneficial for us. I think we will use these things we learned in our future business life, and I would like to thank our professors.”*
- *“.. both a fun and instructive challenge. I am happy to participate and experience.”*
- *“..beneficial to understand estimating project size.”*

Source: Hacaloglu *et al.*, ‘A Survey on COSMIC Students Estimation Challenge’, IWSM-MENSURA – Izmir (Turkey) 2022.





**Questions?**

**Contact: [alain.abran@etsmtl.ca](mailto:alain.abran@etsmtl.ca)**