

# Designing and testing industrial heat exchangers with nano-coolants

**Start from:** February 2019

**Period:** 6 months

**Full Time**

**HBO (Bachelor or Master)**

## Who are we?

Synano is a start-up established in Feb 2017 and incubated at YES!Delft. At Synano, we develop nano-coolants for boosting the cooling of high tech equipment and electronics. Efficient cooling is one of the most important technical challenges that many industries face, such as data centers, power electronics, transportation and manufacturing. Current coolants are not sufficient to cope with the thermal challenges of the future. Therefore, we use 'nanoparticles' to increase the heat transfer of current coolants and fulfil the cooling needs of the next generation electronics.



*Nano-coolants*

We have a multi-cultural, creative and awesome team with expertise in chemistry, engineering, finance and marketing. We are looking for mechanical engineer with hands-on experience to join our team.

Join us and together we go from cool to super-cool!

## Project objective:

- Designing industrial cooling systems on lab scale
- Testing those systems with commercially available coolants and Nano-coolants
- Compare performance and recommend improvements

## Project Activities:

Project tasks which will be performed by you include:

- Research on cooling system design and heat transfer principles
- Interviewing cooling equipment manufacturers to understand their needs and component level design
- Calculations to design the system to achieve required cooling performance
- Designing and listing components
- Ordering or manufacturing components
- Building the test setup
- Testing commercially available coolants and Nano-coolants
- Comparing performance and analyzing results
- Recommendation for improvement

## 'Must have' skills:

**SYNANO**



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2629JD, Delft,  
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[www.synano-cooling.com](http://www.synano-cooling.com)

- Hand-on experience with mechanical projects
- Experienced with Basic calculation and design tools like Excel and AutoCAD or Inventor
- Able to use workshop machines such as laser cutting, milling, drilling etc.
- Basic programming skills on Arduino and MATLAB
- Able to provide out-of-box solutions
- Predict and plan for next steps

#### 'Nice to have' Skills:

- Independent working attitude
- Pro-active approach
- Flexible and risk taking

#### Why should you join us:

- Internship compensation
- We also offer employment opportunity after internship, based on your interest to continue with us and your performance
- Learn and grow with the company so that you are a part of our success story
- You won't just be doing research, but also be a part of decision making and business development of the company
- Experience the dynamic working environment of a startup and grow your network by meeting new people

Please send your CV and motivation letter to [info@synano-cooling.com](mailto:info@synano-cooling.com) to apply for the vacancy.

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