

SEEK
INDUSTRIAL
EXPERIENCE



AN UNDERGRADUATE HAS A ONCE-IN-A-LIFETIME OPPORTUNITY TO UNDERTAKE AN INDUSTRIAL PLACEMENT. **GABRIELLA THOMAS** URGES YOU TO SEIZE IT WITH BOTH HANDS

COMPARED with our peers in medical school, where workplace experience is considered so crucial to development that it's often mandatory to work in the likes of care homes and hospitals, engineering work experience is often discretionary.

In the interest of your own development and discovering which career path you might like to tread, evidence shows you would be putting yourself at a serious disadvantage by overlooking such an opportunity.

In a survey of more than 400 companies conducted by the UK's Learning and Skills Council, 90% said that relevant work experience is an important part of a CV

and 13% said they would not interview a candidate without it. A company will invest a lot of time and money in you, so needs to determine your potential.

A number of employers won't hire potential candidates unless they have previously worked for the company on a placement or as a summer vacation student. Think of it as like test-driving a car. The company wants to know that you're fit for purpose – that you can apply that classroom learning to a practical end.

At the same time it's also your chance to investigate your potential employer, its employees and the culture. There is no better way to determine if a job, organisation or industry is right for you.

#COMMENTS

@JIDEAJOJE

My placement was valuable because it gave me the experience which is so necessary, and got me a grad job with the same company

TAKING THE OPPORTUNITY

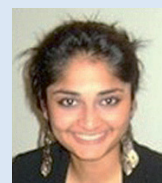
Hopefully, you'll discover that your university works closely with local employers and other agencies to create opportunities for students to undertake industrial placements. If not, the onus is on you to make contact with companies and create your own opportunities. There are several forms of industrial placement and all are valuable in gaining that much-needed experience:

- INDUSTRIAL PLACEMENT**
 Typically an extended period (6–12 months), this paid work forms part of a degree. I strongly suggest taking advantage where possible as it will give you enough time to become familiar within an industry and to enhance your technical and soft skills.
- SUMMER PLACEMENTS**
 These usually last 8–10 weeks. It incorporates a project and activities similar to the full industrial placement but is condensed into a shorter time frame.
- OPEN EVENTS WITHIN AN ORGANISATION**
 These allow you to meet and talk to those who work within an organisation.
- WORK SHADOWING**
 This is typically voluntary and provides an overview of the workplace.
- COMPANY-SPONSORED COMPETITIONS**
 These are a great way to learn about a company, whether it's taking part in environmental projects or designing innovative plants. Look out for posters and emails sent out by your university.
- VOLUNTARY WORK AND PART-TIME WORK**
 Although there may not be a technical benefit, this proves you're committed and allows you to hone your soft skills.

TO ACTUALLY SEE AND WORK ON PROCESS EQUIPMENT BRINGS TO LIFE THE MATERIAL YOU'VE LEARNED AT UNIVERSITY.

GABRIELLA THOMAS

POSITIVE FEEDBACK



**SHALINI PAL,
THE UNIVERSITY OF
MANCHESTER, UK**

COMPANY: CARGILL

"I still can't believe how quickly I grew up from student to project engineer to meet all the expectations of my peers in a global multi-million dollar company.

During my first few weeks I felt 'thrown in at the deep end' but the support, advice and lessons from colleagues added to my skills and gave me the confidence to progress. I relished the responsibility of being assigned a budget to complete my own project. My understanding was tested beyond the equations you find in your books. My knowledge was enhanced through applications and projects I could have never undertaken at university; my vision was nurtured yet challenged every step of the way. From chemical to mechanical to electrical engineering, from project management to economic analysis to root cause analysis and imitating corrective action, from structural analysis to PID control loops to biological invasive species and so on. I haven't the space to list all I have experienced and learned!

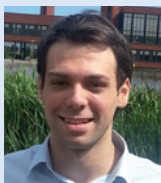
Finding myself an industrial placement allowed me to develop on a personal, academic and social level and boosted my confidence for future job interviews. For any chemical engineering students who are serious about pursuing a successful career, I urge you to look for a placement.

It's not always easy and believe me, you will face many rejections before you come close to an offer but keep going! It will help to set you apart from many of your peers and the skills you will learn are beyond what any lecturer or book can provide. It builds your potential as an engineer and your character as an individual."

WHY BOTHER?

- An industrial placement gives a real sense of the scope and scale of an industry.
- It can help you make an informed choice about what sort of engineer you want to become: a technical expert working in a niche area; a day-to-day troubleshooter on the production line; an industrial research and developer; or purely a commercial operator.
- You learn lots about process engineering and you learn it quickly when working with live process equipment, especially when adhering to a fixed time scale.





HARRY CONNOR,
THE UNIVERSITY OF
MANCHESTER, UK

COMPANY: INVISTA

“During my placement year I enjoyed the responsibility of delivering my own projects that created real value for the company by improving its technology offering to clients in China and India.

In one of my projects, I creatively designed a process change against a number of key performance indicators. I developed the project from initial concept stage into an engineering package. This gave me the experience of economic analysis, freedom to operate, patentability studies, identification and mitigation of technical risks, running an experimental programme, safety studies and the design of a wide range of process equipment. In another project, I was responsible for building a model of a petrochemical plant using *Aspen Plus*.

My advice for students thinking about undertaking a placement year? Go for it! It is an amazing opportunity to learn from experienced engineers. It has been one of the best decisions I have ever made. The experience has given me the edge in a competitive job market.”



GABRIELLA THOMAS,
THE UNIVERSITY OF
MANCHESTER, UK

COMPANY:
EXXONMOBIL

“I’d always planned on taking an industrial placement. It takes organisation and discipline though, to apply for placements whilst contending with your academic commitments – attending interviews and assessment centres can be time consuming but I guarantee it’s well worth it.

My advice is to do your research and keep it focussed: find out about your target company’s products, services, clients and market. Ensure that you know what skills and knowledge would be required for the job you are applying for. Also find out the learning opportunities that the company will create for you.

Take the initiative and search beyond the employer’s website and marketing materials. Use your university’s careers

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GABRIELLA THOMAS

services. Talk to lecturers that may have ties or research projects with the company. Contact graduates or current placement students from your university who have worked at the company, review the trade press (*tce*) and related engineering websites, including IChemE’s.

Once you reach the interview/assessment stage, talk to employees to find out what it is like to work there.

Furthermore, take a moment to observe those around you to gain a sense of whether this is a company that you would like to work for. If you can envisage yourself as a part of the company then it is a good indication that you can work well in that environment and that you would be a cohesive member of the organisation

My industrial placement has been incredibly valuable in enhancing my technical skills as well as my soft skills. This should serve me well during my final year at university and beyond.”

CONCLUSION

I hope this article will have been of benefit in helping you decide how you wish to spend your undergraduate degree. I highly recommend gaining industrial work experience before you graduate.

The intention of this article is to benefit the undergraduate engineering community and I wish all of you the very best in your future endeavours.

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#COMMENTS

@THEAJANAKUS

I was able to visualise what I have learnt in theory and see chemical reactions for real. I appreciate health and safety more now.