

IChemE

Job-hunters' survival kit



About this guide

As you near the end of your time at university, getting a good job is uppermost in your mind.

Although there are many excellent books and websites that can help with finding a job, none are targeted solely at chemical engineers. This guide has been developed using the knowledge and expertise of our members. We hope you'll find it useful.

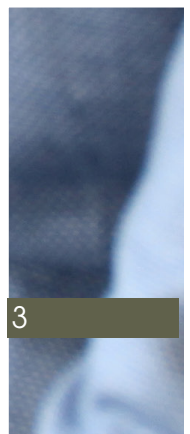
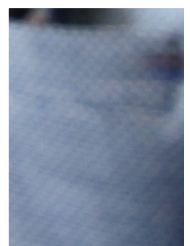
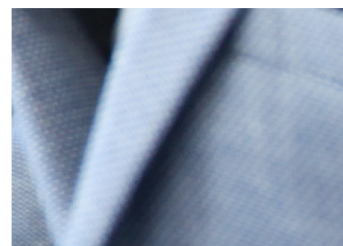
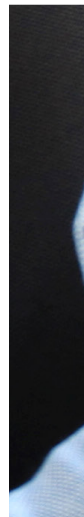
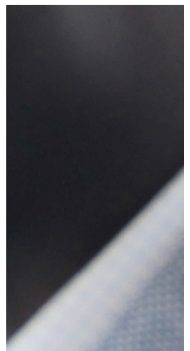
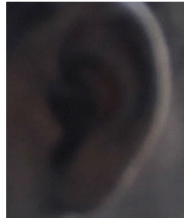
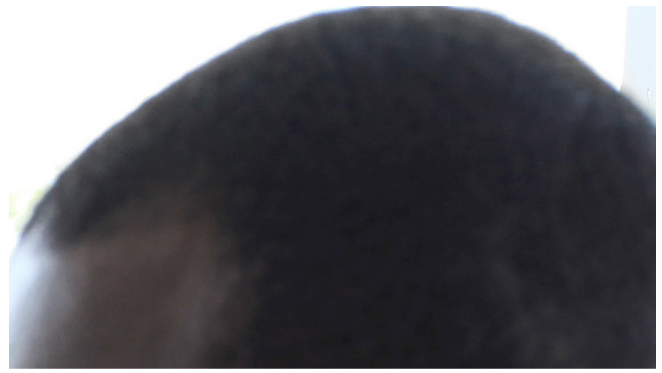
This document is produced in digital format only and is regularly updated. The latest version can be found online at www.icheme.org/job-hunters

Feel free to print a copy and make use of the self-evaluation tools, skills audit and notes sections.



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Employer expectations



"Let your creative interest in engineering and its commercial applications shine through during interviews. Remember how different individuals can all add something special to a successful team project. Help foster an open working environment in which we can work together to achieve high levels of performance. Be willing to cross boundaries between disciplines and cultures. Learn another language!"

Air Products



"Applicants should sell their achievements and past work experience during the interview. Applicants demonstrating a good understanding of the company tend to shine. The ability to work well within a team, use your initiative, challenge the status quo and show the potential to lead a project task force is important."

Wood



"We are looking for creative, academically able chemical engineers from diverse backgrounds who can take issues beyond the constraints of conventional thinking; who are open to new possibilities; and who innovate by taking beyond traditional approaches to problem solving."

BP

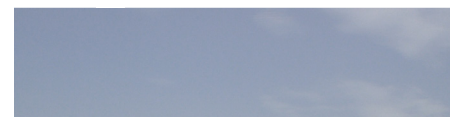


Photo courtesy of Amec Foster Wheeler



"Your application should reflect your interest in the vacancy. At the interview show you know about the nature of the engineering construction industry and relate your experience to the job role. Demonstrate that you have the academic ability, are able to work in a team and provide evidence that you are motivated and adaptable. This should give you the edge over other candidates. Good preparation usually makes the difference."

Costain Oil, Gas and Process



Photo courtesy of BP



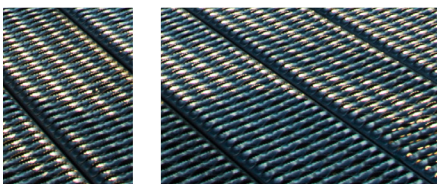
"In graduate applicants we look for motivated, enthusiastic bright personalities, with above-average academic achievements and good team-working skills, confidence and evidence of leadership qualities. They should be able to present themselves and their ideas well, both on paper and in face-to-face situations. Our graduates are fully operational from day one and therefore initiative and their ability to take early responsibility is also vital."

KBR



"We look for young entrepreneurs with enquiring minds, willing to face new challenges, with good academic achievements and good communication skills. Also, we look for people who can be a keen team member as well as having the ability to work on his or her own initiative."

ExxonMobil



1 About you

How well do you know yourself?

Knowing your strengths and weaknesses will help you determine which qualities to emphasise to employers, and which areas you need to develop.

Employers will vary in how they value each of the attributes listed below, and of course, different jobs need different strengths. Make sure you have an idea of what your employer is measuring so you can try and influence the outcome of an application in your favour.

Try to describe yourself as honestly as possible under each section. We've provided some keywords to get you started. Remember to give examples of where you've shown these attributes.

Quality	Keywords	Self-evaluation	How is this demonstrated?
Personal	Flexible Mobile Restricted Fit Robust Sporty		
First impressions	Body language Confidence Extrovert/introvert Articulate Relaxed/nervous		
Interests	Competitive Creative Intellectual		
Personality	Ambitious Competitive Enthusiastic Logical Lively Ruthless		
Values	Open-minded Humane Independent Resilient Environmentally-conscious Altruistic		
Social skills	Communication skills Leadership Team worker Persuasive		
Motivation	Cautious Competitive Entrepreneurial Ambitious		
Overall qualities	High-flyer Middle-of-the-road Steady Reliable Practical		

Skills audit

Evaluate your skills under the headings below. Rate yourself from 1–4:

1 = Needs considerable attention; 2 = Needs attention; 3 = Satisfactory; 4 = Good; n/a = Not applicable

Try to identify where your weaknesses are so you can work on an improvement plan.

Handling information					
I can use search-and-find techniques (electronic & hard copy)	1	2	3	4	n/a
I can produce detailed and accurate data	1	2	3	4	n/a
I'm able to distinguish 'data' from 'results'	1	2	3	4	n/a
I can use various software packages (ie Microsoft Office)	1	2	3	4	n/a
Communication skills					
I'm able to give oral presentations	1	2	3	4	n/a
I'm able to present discussions/arguments	1	2	3	4	n/a
I can produce written reports	1	2	3	4	n/a
I'm able to listen to colleagues' ideas and suggestions	1	2	3	4	n/a
I can take constructive criticism	1	2	3	4	n/a
Improving learning and performance					
I'm able to assess my current knowledge, skills and competencies	1	2	3	4	n/a
I can identify opportunities to develop my knowledge, skills and competencies	1	2	3	4	n/a
I'm able to critically assess the skills I possess in relation to the needs of potential employers	1	2	3	4	n/a
I can learn new skills readily and confidently	1	2	3	4	n/a
Planning and organisation					
Planning and organisation	1	2	3	4	n/a
I can operate a day-to-day planning system	1	2	3	4	n/a
I'm able to plan for meetings, reports, presentations etc	1	2	3	4	n/a
I can plan the content and layout of my work	1	2	3	4	n/a
I can manage projects effectively	1	2	3	4	n/a
Working with others					
I'm able to work effectively and make a significant contribution as part of a team	1	2	3	4	n/a
I can assist others with my skills	1	2	3	4	n/a
I can influence the work of others	1	2	3	4	n/a

Interests and values

What are your main interests? What does this show about you?

Example

Hobbies: Swimming

What this says about me:

I am self-motivated (to get up at 06:00 to go to the pool) I have excellent time-management skills (I start work at 09:00 and always fit in a swim beforehand).

Hobbies

What this says about me:

Interests

What this says about me:

What subjects do I enjoy most?

What this says about me:

Which parts of my current work/study would I regret not continuing with?

What this says about me:

Notes

Use this space to ask yourself some more questions regarding your skills and interests from the previous section. Examine all aspects of your character – it's all relevant in establishing where you will find yourself most challenged and fulfilled at work.

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Conclusion

What have you learnt about yourself? Are there any areas of weakness that you can work on? What are your best qualities and how can you accentuate them? How do you demonstrate skills that employers are looking for?

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2 The search

Which positions should you apply for? Have you researched the range of jobs and sectors that chemical engineers can work in?

Before deciding on the job that you want, consider the positions that are open to a qualified chemical, biochemical or process engineer. The sectors employing chemical engineers are becoming increasingly diverse so don't be too narrow in your choice of role or employer. It's also important not to limit your search according to location as the company may be flexible on this, or help you with relocation costs.

Which industries are you interested in?

Chemical engineers work in a wide variety of sectors including:

- food and drink
- pharmaceuticals and healthcare
- water
- energy
- nuclear
- mining and minerals
- chemicals and allied products
- oil and gas
- non-oil energy and chemical plant manufacturing industries
- consumer products

If you're interested in a particular area of chemical engineering you can join one (or more) of IChemE's special interest groups. Meet experts in the field, find the best routes in, attend webinars and read their newsletters. Log in to MyIChemE at www.icheme.org to view your special interest groups – you can join additional groups by visiting each groups page at www.icheme.org/sigs.

Do you want to work outside of chemical engineering?

There are companies that value chemical engineers' problem-solving skills regardless of the actual product or service that the company offers. Some basic research should reveal the 'process' aspects of their business and you can tailor your CV to demonstrate your ability to solve their problems.

Think about these options, research prospective companies, and visit your university careers service. They'll be able to offer you individual careers guidance and you'll be able to use their facilities to discover which careers suit your skills and personality, where the best graduate schemes are, and much more. They often have software that can help narrow down your goals or suggest a few more ideas.



Preparing your search

When preparing your job search be flexible and keep your options open as long as possible. By engineering standards, the chemical engineering profession is young and can be misinterpreted. You also need to be honest with yourself about the kind of job you would be happiest with. Answer the following questions honestly:

Is location a problem (in another county/state/country)?
Do you see yourself as a generalist or a specialist?
Do you want to work for a large or small organisation?
Does teamwork really appeal?
Are rugged conditions OK (shifts/travel/offshore/remote)?
Do you thrive on exposure (sales/negotiation)?
How do you balance your ambitions with the pressure of heavy responsibility?
What is your leadership potential?
Do you prefer the academic environment?
Do you mind travelling (nationally or internationally) for your work?
Are you looking for a company with a graduate training scheme?

3

Company research

Don't complete an application form, submit a CV or attend an interview without doing your homework first.

Gather as much information about a company as you can. Use the internet and social media, libraries, newspapers and annual reports for information, plus the sources listed under Section 8 of this guide. You can use the form below as a starting point but this is not exhaustive:

Employer	Chemical engineering plc
Business	Process design, project management, manufacturing technologies
History	Founded 1965
How does the company rate against its competitors?	One of the biggest in its field, well respected
What is the company's weak point?	
Have there been any major news stories connected to the company?	No major issues in the last 10 years
Sites	65 sites across Europe, North America, South America, Middle East, Asia and Australia
Number of staff	10,000
Image	High profile, vibrant, multinational, charitable
Chemical engineering involvement	Has accredited graduate scheme with IChemE, encourages staff CPD, has won awards for new technology
Finance:	
– Profit	US\$2.4bn
– Turnover	US\$4.5bn
– Capital employed	
– Capital investment	
– Share price	US\$48.51
Press comment	
President	Mr John Smith
CEO	Ms Jane Jones
Salaries survey	
Additional information	
Contribution you could make	Expand R&D business, promote image
Questions for them	Policy involvement, funding trends, expansion of membership

4

CVs and forms

The basics

Your CV/resume

Be clear and make sure the information is relevant – employers don't have time to decipher what your CV is trying to tell them. Compile a list of your best qualities from section 1 and use them to tailor your CV to match specific employers' expectations. You're far more attractive as a potential employee if you have the qualities that they're looking for.

Example headings:

- personal details
- education
- work experience
- extra-curricular activities (hobbies and the skills and responsibilities you gained from them)
- general skills

Select a format that suits you best; either skills-focussed or chronological:

- always include a CV in a speculative application
- it must be typed
- highlight successes and contributions
- avoid listing positions; instead show how each job demonstrates something about you
- two sides of A4 maximum
- tailor each one to each individual position, emphasising the areas that you believe would be of most interest to a particular company.

Building a better CV:

- leave out any irrelevant material – be brutal. Include it only if it proves your capability to do the job
- avoid wordy CVs – make your points concisely. Minimum words = maximum impact
- aim for clarity and choose a font that's easy to read (Arial, Calibri, Verdana etc)
- avoid 'flowery phrases' – your words should imply action and decisiveness
- make sure grammar and spelling are perfect
- don't be quirky – most employers won't be impressed by a comic font or coloured paper
- use good quality paper if printing a hard copy
- save as a PDF if sending electronically
- if your email address is vulgar, complicated or sounds at all unprofessional, avoid using it or set up an alternative.

TOP TIP

Your social media profile/s could be a potential pitfall – do you really want prospective employers seeing details of your last night on the town? If there's anything that might put them off, change your privacy settings.

CV examples

The examples given on the next two pages are two of the most widely-used styles of CV and are acceptable to most employers.

If you're not a recent graduate you'll have more experience to draw on, but the principles are the same regardless of your age or circumstances. Resist the temptation of listing everything that you have ever done. Be concise and clear. Remember that you're advertising your skills and 'selling' yourself.

Example 1 – traditional CV

(Source: www.prospects.ac.uk)

Sarah Bartholomew
477 Retreat Street, Edinburgh, ED11 7HD
Email: sarahb@hotmail.com
Tel: 07832 00638333

I am an ambitious and personable individual with experience in customer service and administration.
Soon to graduate, I am seeking a role to build on my biological studies.

Education and qualifications

2012–2015 University of Edinburgh
 BSc Marine Biology, 2:1

Modules included: Professional and Research Skills for Biologists, Marine Biology, Biotechnology and Oceanography, Evolutionary Ecology and Physiology of Animals, Conservation Biology and Fish Ecology.
Dissertation: The Effects of Petrochemical Effluents on the Biodiversity of Macro and Micro Fauna.

2010–2012 Turnpike 6th Form, Hull
 A-levels: Biology (A), Chemistry (B), Maths (B), General Studies (B).

2006–2010 St James High School, Hull
 GCSEs: Double Science (A*), Maths (A), English Language (A), Geography (A),
 Technology (A), Spanish (A), English Literature (B), History (B).

Work experience

Jan 2014–September 2014

Retail assistant, student union Co-op, Edinburgh In this role I served customers, worked the till system, took deliveries, stocked shelves and undertook general cleaning duties. Working quickly as part of a team to ensure customer waiting times were kept to a minimum. I was also the nominated first aider for the shop and required training and review on a regular basis.

October 2013

Student ambassador, University of Edinburgh I was responsible for meeting and greeting new students to the university and advising them on locations and functions within the campus. As part of this role I was asked to present to a full cohort of students as part of an open day and manage questions from students and parents to best promote the university.

When building a traditional CV:

- start with a bold statement that outlines your purpose. Include characteristics, skills, experience and sector interest in two concise sentences
- include modules and dissertation if they're relevant. It's important to tailor your CV
- include an outline of what your previous roles involved and try to incorporate the skills that resulted from your experiences
- really think about the details of the role to bring out your skills/experience.

Example 2 – skills-based CV

(Source: www.prospects.ac.uk)

Hannah Schlor

24 Redford Lane, Bromsgrove, Worcestershire, W1B 6GT

Email: hs@hotmail.com

Tel: 079936352889

Education and qualifications

2011–2014 University of Loughborough

Geography and Sports Science, 2:2

Modules included: Teaching and Coaching, Psychological Issues in Sport, Sports Ideologies and Values, Global Environmental Change, Environmental Systems and Resource Management.

2009–2011 Bromsgrove High 6th Form, Bromsgrove

A-levels: Physical Education, Biology, Psychology, General Studies.

2004–2009 Aston Green School, Bromsgrove

GCSEs: 9 grade A–C including A* in Physical Education.

Skills profile

Leadership

- While team leader for 'The Annual Loughborough Sports Challenge', our team came second out of 41 entries. I demonstrated strong leadership skills in this role; motivating and leading the team to this outstanding performance
- I am currently responsible for leading a team of bar staff in my role as assistant manager at JD Wetherspoon. Learning from my success on the sports field, I have further developed my leadership skills in this role
- In my captaincy of the university's women's hockey team in 2012 I successfully led the team to a number of victories.

Motivation and ambition

- I am able to perform well in high-pressure environments as I am very competitive with a strong motivation to succeed. An example of this is the way I was able to balance work and study with my sporting interests while at university. Training several times a week while also meeting all assignment deadlines required motivation, prioritisation and organisational skills
- Additionally, I have always had a part-time job alongside my studies, or in the summer holidays. This demonstrates personal motivation to continually develop myself and my skills.

When building a skills-based CV:

- list your education in reverse chronological order, starting with the most recent
- A-level grades are not essential. If a minimum grade is required state these next to each subject in brackets
- define key-skill sub-headings so you can demonstrate your abilities. Think about modules you have covered at university, professional skills you have developed through your course and any employment or voluntary experience that has developed your skills.

Application forms

- draft answers to every question before writing on the form/submitting it online
- answer all questions and don't leave any gaps, even if you have to put 'n/a'
- expand on degree options by listing topics you've studied
- highlight prizes and awards
- school years – mention responsibilities*
- university career – mention option selection, interests, responsibilities*
- mention all relevant experience*
- don't exaggerate or make things up. Be prepared to answer questions on all aspects of the form at the interview
- get referees' permission.

*make the most of the 'additional information' section

Use the space below to describe all choices, options, activities, responsibilities and contributions to success during your school, university and work experience.

School years
University career
Work experience

Covering letters

It's important when making a speculative application that the company can see why you've targeted it. The covering letter/email is the perfect tool for establishing your credibility.

Remember that what you can offer is more important to the company than what they can offer you. Try not to send applications to "The Personnel Department", it's much better to address it to the head of the appropriate department of where you want to work, ie Chief Process Engineer or Head of Engineering (a phone call to the company will get you the name of the relevant person).

Always send a covering letter or email with any application or CV:

- do not hand-write a covering letter
- use good quality paper
- highlight your strengths
- show how well suited you are to the job
- be positive – expect an interview
- check spellings and readability – use spellcheck and grammar tools.

Take time to write a basic cover letter structure that you feel comfortable with and customise it for each company you apply to.

Standard business letter

Your name
Address
Contact details

Salutation

try to get the name of the person.

First paragraph

why are you writing? Either in response to an advert (detail it) or as a speculative application.

Second paragraph

briefly state two or three skills from your CV and follow with a description of how these will benefit the company.

Third paragraph

close the letter and give the company a specific action to take (ie invite you to an interview), or an action that you will take (ie I will call you on...)

Signature

"Yours sincerely" and sign your name (or add digital signature if sending as an email).

5 Interview skills and practice

Preparation

- practise answers on interests, ambitions, progression etc
- prepare good questions about the organisation – think about your views on some of the company issues – government, ethics, diversity, prospects for the future etc. This shows that you're interested
- practise difficult and unexpected questions like:
 - why do you want to work for us?
 - why do you think you're suitable?
 - what could you bring to this company?
 - describe a time when you demonstrated good people management skills.

Interviewers aren't interested solely in the relevant qualifications that you may have; making decisions on who to employ takes a lot more into consideration. Look at the following topics and practise answers based on these areas:

Approach to work – what's your approach? What do you think is the best way of 'getting things done?' Are you procedure or results orientated?

Perseverance – what has been your most challenging project? What difficulties did you meet and how did you overcome them?

Achievement – what is the most significant impact that you have made either in previous jobs or at university?

Values – will this job meet your needs culturally? What are your criteria for achievement – career progression, status, money etc?

Motivation – what are your interests and why did you do/choose that? (This could be applied to hobbies as well as past working experiences).

Weakness – describe your biggest failure. How did you deal with it? What did you gain from the experience?

Social skills – how do you deal with various personality types/working situations etc?

Initiative – what activities/projects have been implemented that were your ideas?

Balance – what place does work/career have in your life? Do you maintain an active family/social life away from work?



Practice

Get someone you trust to role-play an interview. Agree a realistic job description and write down as much detail as possible. Get the interviewer to ask questions based on the topics below. Every subsequent job interview will cover the basics and these answers should come easily and naturally to you.

Interviewing checklist – build the framework of an interview. Check your responses when asked about these areas of your life. Get the interviewer to mark any areas where you need to improve your answers.

Factual information	Areas used for evaluation	Improvement needed?
Education	<p>Information requested – schools, university, exams, other achievements (cultural, social, technical).</p> <p>Evaluate choice of subjects, performance, causes/results of failures.</p>	
Work history	<p>Information requested – positions held, main duties, responsibilities, relationships, areas enjoyed/ not liked, reason for changing.</p> <p>Evaluate competence of candidate against demands of job.</p>	
Aspirations	<p>Information requested – ambitions, plans for achieving, short & long term.</p> <p>Evaluate how realistic ambitions are set against actual academic and work achievements and personal attributes.</p>	
Interests	<p>Information requested – main interests. What intensity/how long for?</p> <p>Evaluate to what extent would the job give an outlet/ barrier for these interests?</p>	
Interpretation – assessment of personal qualities		
Energy and drive	General level of work output, ability to stay with a problem, persistence, enthusiasm, motivation.	
Work discipline	General efficiency, ability to plan, control and monitor work and time, ability to set objectives and standards.	
Decision making	Quality of judgement on personnel.	
Intellectual effectiveness	Analytical ability, speed of thinking, creativity.	
Relationships	Sociability, ability to work individually/with a team, extent of guidance and support needed, ability to delegate.	
Flexibility	Ability to adapt to new and different people, technology and environments, responsiveness to change.	
Emotional stability	Ability to work under pressure, response to setbacks and failure.	

Equal opportunities

Some topics or questions may arise that could be perceived as infringing on equal opportunities or discrimination policies. These could include questions such as "are you planning on having a family?", "what is the extent of your disability?", or comments about ethnicity, religion or age. It's important to remember that whilst these questions are not permitted to influence decisions made on candidates, it could be that the interviewer has either no real training in this area, or that they are trying to be friendly.

It's difficult to know what to do in these circumstances, but it helps to know your rights. Discrimination laws will differ by country but information should be available from your country's government website.

At the interview

Dress and first impressions:

- **be clean and smart:**
 - allow plenty of travel-time so you don't arrive sweaty and flustered
 - avoid hot drinks/food if offered to minimise the chance of spillage
- **smile and shake hands**
- **keep good eye contact when speaking to the interviewer.**

Questions

When asked:

- **listen carefully**
- **sit alertly and look confident. Blank or terrified faces are unnerving to an interviewer**
- **keep calm, don't rush answers, ask for clarification if needed**
- **expand on answers, concentrating on strengths and positives**
- **maintain good eye contact throughout, but don't stare**
- **be positive, optimistic.**

To ask:

- **challenge the interviewer with prepared questions on relevant subjects like job specifics and company targets, deals, structure, career development etc**
- **accept responses seriously and build on them with follow-up questions if appropriate.**



Interview advice

Caroline Roberts-Haritonov, Director and Chief Consultant, Astrimar

"The ability to communicate effectively is probably the most important attribute. Good communication enables you to work better together and to understand and deliver on work objectives more clearly.

"Take time to understand the job requirements and how they match your own abilities and experience, and find out about the company, its products and services. This shows that you are genuinely interested in the company and the position, and will enable you to speak confidently on how you could fit into the organisation and what attributes you would bring.

"Don't exaggerate your knowledge and experience – always be honest. If you exaggerate, you may come unstuck during the interview, if the interviewer probes deeper and reveals a weakness. Also, if exaggeration is required to get you the job, it may not be the right job for you and may result in stress and difficult working relationships if you struggle to deliver."

Craig Hendry, Graduate Analyst, Civil Service

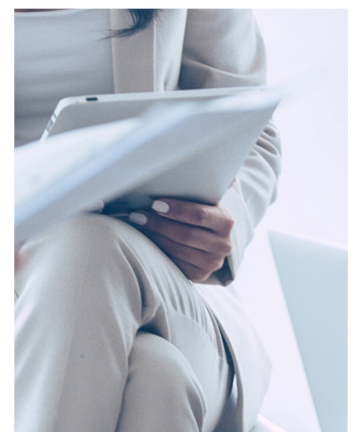
"Companies want to interview someone that is passionate about the job and clearly wants it – not as a means-to-an-end or for pay – but because they have a genuine interest. Most aspects of a job can be taught but the drive to do the job can't.

"Rather than give the usual advice about having evidence put together that proves your abilities, I would advise doing research on the company itself and its operations. This will allow you to smash any questions about the company; show you care about the company; and give you the research to ask a couple of specific insightful questions about the company and your potential future within it."

John Ritchie: UK Development Manager, ConocoPhillips

"It may sound obvious, but the best candidates are those who know themselves, and know the job they're applying for. You need to know what you're trying to sell to your prospective employer (focus on special achievements – particularly outside of university). Remember you are being recruited into a professional role, and being able to demonstrate your professional commitment will give you a huge advantage.

"The interview is only one part of a range of assessment methods that companies will use in recruiting graduates. You may be asked to an interview to assess your technical skills or 'softer' skills (usually both). Most candidates worry about the technical interview, but bear in mind that the interviewer usually wants to gain an insight into how you think, rather than test very specialist technical knowledge.



"As a minimum, understand the technical basics of the job you're applying for (ie if you're applying to be a design engineer, think about the design principles for the processes or equipment that you may be designing). For softer skills, think of examples from your academic life, part-time/voluntary work, hobbies etc, where you have shown the sort of attributes you think the company will look for.

"Don't forget that your interviewer will be looking to you as a potential colleague. Bear this in mind during the interview and the wider assessment process. You need to give your interviewer confidence that you'll fit into the team, and that you'll drive forward the objectives of the team/group/company you're going to work for."

Sarah Clark, Process Engineer, WorleyParsons

"The most important attribute that my company (and almost every other company regardless of industry) looks for, is how you're going to fit in as an individual; what are your personal values and how do they align with our company? Having individuals whose values conflict with that of the company simply won't last long. Values drive a company vision and they want people who can work together to achieve this.

"The best way to prepare for an interview is prepare! Don't be casual about an interview – this is your job, your career, your future, so serious preparation in advance is a must:

- **be honest with yourself: why are you applying to this company? What are your motivators to work here?** The interviewers will ask, and answering these questions will also help with writing your job application;
- **understand the industry you're going into and be aware of its history.** For example downturns in the oil & gas industry are extremely common. You don't need to be an expert, and your interviewer won't expect you to be, but knowing there's an oil price crash almost every 10 years will show you have an awareness;
- **understand the company you're applying to.** What type of work does it do? What recent contracts has it won? What ongoing work does it have? Are there areas it's looking to further develop?;
- **prepare some questions to ask your interviewer.** This can be about company policies or its graduate programme, worldwide opportunities if it's a large company, etc;
- **go over your notes the night before, check the time and location of your interview and make sure you've planned plenty of time to get there.** Then relax and have an early night.

"My tips for 'do nots' in an interview are obvious: don't try to be someone else – be honest. Be aware of your body language. Don't slouch as this will make you look disinterested. You might be the best candidate on paper, but if your body language says you don't care you won't get the job."



6 Psychometric and other tests

Psychometric tests

These are structured, systematic ways of evaluating how people perform on tasks or react to different situations. There are two types:

Aptitude

- given under exam conditions and strictly timed
- questions are multiple choice and gradually become more difficult
- don't worry about not finishing, just work at your own pace. Don't be tempted to guess the answers as some companies negatively mark random responses
- cover a range of logical reasoning topics such as: verbal, numerical, diagramming, spatial.

Personality

These explore the way you react to different situations. The employer will have some desirable characteristics for the job and will be looking for suitable matches. They're not timed and have no right or wrong answers – the first one you think of is probably the most honest, and there will be checks for consistency.

How to prepare for psychometric testing:

- most of it's already done – it's your skill profile and personality that are being tested
- careers services may have example papers
- always get feedback after the testing – it may help in the future
- keep calm and read the questions carefully.

Group exercises

Team-working skills are essential for success in most job roles, so employers devise ways of testing this. Group exercises are designed to reveal whether you can switch between working individually and as part of a team.

Most employers use indoor group exercises which are usually hypothetical problems, frequently involving mathematical calculations, interpersonal conflicts and critical time/cost considerations, for which there may be a range of possible solutions. You're expected to maximise your contribution but also ensure that the team fully uses others' skills.



TOP TIP

Remember that assessors are more interested in the way the team reaches their solution than the actual solution chosen.

Dos and don'ts:

- read and re-read the brief, everything will be relevant
- pay attention to time deadlines
- look at the equipment provided and use it
- show initiative – play a part, but don't take over
- be supportive – draw out quieter members of the group
- never criticise the other candidates
- defend your ideas if challenged but be prepared to compromise
- in most tasks there will be a role for everyone such as leaders, number-crunchers, speakers or time keepers.

Role play

During role play you'll be asked to assume the actions and thoughts of a fictitious character in a certain situation. This technique is used to highlight various skill areas, ie analytical ability, problem solving, decisiveness, communication and people management. This may be part of a business game or group exercise.

Example:

You are given details of a complex problem at a plant. A technical issue could cause conflict or misunderstanding between managers, supervisors, experts, union officials etc. You may be asked to assume the role of one of the people involved and to argue for your solution to the problem against other candidates, or against the interviewer, who will assume the role of another character.

Points to remember:

- you're not applying for a job as an actor. The assessor is not interested in your acting ability, just your work-related skills needed for the job
- if you become too self-conscious you won't do yourself justice
- don't try to create too much of a 'character', adding different facts or making things up. This will only get confusing and it's unlikely to allow you the chance to demonstrate your own strengths – it may also detract from the assessment
- be prepared to argue your case, but remember that most problems are solved through agreement and compromise
- be prepared to compromise but don't concede too easily.

Making presentations

Recruitment presentations can take two forms: one you've prepared in advance, or one prepared on the day.

Golden rules:

- have a logical structure: beginning, middle, end
- make notes, don't read from a script
- use words that you're comfortable with
- pay close attention to timing
- be concise; ten slides for a 20 minute presentation (with at least 30 point text) is optimum
- end on a high note, don't fade away.

Like any skill, making presentations can only be perfected with lots of practice. A coaching session with feedback is always valuable.

Do not:

- read from a script
- mumble
- speak for too long or too little
- apologise for yourself
- waffle
- cram too much onto each slide
- use distracting body language – pacing, fiddling with paper etc.

In-tray exercises

These are designed to simulate the administrative aspects of a job. The most important thing is to prioritise the tasks – what needs doing first – and then do it. These tests assess your ability to act effectively, communicate and prioritise.

Assessment centres

Assessment centres represent a process where several candidates are present. The belief is that assessors can make better decisions, and gain more information on a candidate's abilities with respect to key job demands in this situation, than by individual interview, which is a self-report with no evidence of performance.

Assessments consist of:

- tests of teamwork, leadership skills etc
- a range of tests – to measure different dimensions
- a team of assessors
- candidates being observed together
- decisions made by consensus of assessment team.

Typically assessment centres include group discussions, personality tests, ability tests, presentation skills, team tasks and role plays. (Some areas of these have been detailed previously.)

If you feel that you have performed badly in one area don't panic – it's your overall performance that is taken into account. Remember that although you will be compared to the other candidates, you should not compete against them – most companies are looking for team players so be aware that you will be observed and assessed continuously.



7

Keeping track of things

Applying for several jobs at once calls for complete organisation of your records and calendar. Good records are essential for reminding you when forms/letters/emails were sent and to whom. It doesn't look good to confuse a company with its competitors.

Keep a file or sub-section for each firm/job that you deal with and keep letters, forms, emails etc in date order. Answer any communications quickly, and insert prompts in your calendar or diary.

The table below is an example of a quick reference tool to your main file – extended notes can be kept there.

Organisation	Preliminary		Application form		Interview		Conclusion	
	Initiation	First contact	Received	Returned	Venue	Remarks	Result	Follow-up
Example: IChemE	Advert in <i>The Chemical Engineer</i> 26 June	Email and CV sent 30 June	8 July	10 July	Rugby 28 July	Interview by Mr John Smith and Miss June Davis; three other candidates on short list. Key topics: communications skills, attitude to teamwork, considerable travel (more details see file)	Offer dated 8 August	Accepted 12 August

8 General information

Who to ask

Careers advisors at your university will hold a wide range of information on employers, jobs, CVs, applications and interviews.

Contact companies that interest you and ask for graduate recruitment packs/information. They may also have a list of vacancies. You should also network with other engineers in the field by attending IChemE regional member group or special interest group events. Find out how others got their jobs and pick up tips.

Where to look

Your university careers service

Don't forget that your university careers service can offer individual advice on your CV and job applications. They'll have a full library of information including local and international company listings, books and videos giving advice on where and how to apply for jobs and how to prepare for interviews. They can also help you with any questions about visas or working abroad.

Graduate recruitment directories

Prospects, Hobsons, Seek and many others have helpful websites. Check your local authority web pages for help in finding local vacancies or companies.

Papers/periodicals

Newspapers and their websites often feature appointments sections. The vacancies are sometimes divided by sector and published on different days. Search online to find out. Also try the appointments sections/job pages of *The Chemical Engineer* or at jobs.thechemicalengineer.com, Chemistry in Britain, New Scientist etc.

Recruitment fairs

Recruitment fairs are held by some universities and business/industry sectors. Some are also organised regionally by graduate recruitment companies or by organisations such as Prospects. Search online for "graduate recruitment fairs".

Recruitment agencies

There are plenty out there – try to find one that specialises in engineering jobs or relevant sectors.



Internet

Websites are not only a useful and extensive tool for job searching and recruitment, but also for the research needed on which companies you should apply to, and for further knowledge once an interview has been arranged.

All companies have an online presence these days and the range of employment websites is huge. Do not underestimate the effectiveness of these sites. There are some really good tips on matching interest and personalities to possible careers as well as CV writing, further education and work experience for gap years etc.

Useful websites for job hunters:

- *The Chemical Engineer's jobs board:* jobs.thechemicalengineer.com
- www.seek.com.au & www.seek.co.nz
- www.jobstreet.com
- www.jobs.ac.uk
- www.gradcracker.com

Social media

Due to the meteoric rise of social media in recent years, the jobs market has seen quite a change in how recruiters advertise positions, and how job-seekers find jobs and work placements. Join IChemE on LinkedIn, Facebook, Twitter or Instagram to network with other chemical engineers and find out which jobs are available.

However, you should set up separate professional profiles if your personal social media profiles contain any information or photos that you'd prefer recruiters to not see.

Next steps

You're graduating soon so you should be thinking about your next career steps and continuing professional development (CPD). Upgrade your IChemE membership as soon as you graduate and start looking into your specific pathway to becoming a Chartered Chemical Engineer.

Visit www.icheme.org/chartered for information on how to prepare for your application, when you'll be eligible and why you should start planning now. View the example reports to see how other members have been successful in their application.



Get Chartered workshops

IChemE organises Get Chartered workshops – both online and in person – so watch out for announcements. Not only will it help you prepare for your application for Chartered Chemical Engineer, but it is also a great opportunity to make contacts within your local member group and proves to prospective employers that you're organised, enthusiastic and on the path to becoming a professionally qualified chemical engineer.

Visit www.icheme.org/groupevents to see what's coming up. IChemE's YouTube channel features a recorded webinar on how to get Chartered that you can view at your leisure: www.youtube.com/icheme

Make the most of your membership

As an IChemE member you have access to a host of resources that can help during your job search and beyond:

The Chemical Engineer

This magazine features breaking news in the process industries, feature articles, an events diary and appointments section featuring all of the latest opportunities for chemical engineers. In addition you can find everything online at www.thechemicalengineer.com including the new and improved jobs board. Impress employers with your knowledge of their company and find out which industries are doing well.

Regional member groups

Get involved with your local member group to meet other chemical engineers of all ages and backgrounds. Find out how they got into the job market, whether they have any inside tips, or help organise events yourself. Getting involved in IChemE activities looks great on your CV and shows your enthusiasm and dedication to the profession. You'll also make some great contacts that will be useful throughout your career.

Special interest groups

If you're interested in a particular area or industry, join one (or more) of our special interest groups. Make contacts in the field, get access to the latest research and industry news and prove you're serious about your career.

You can join multiple special interest groups as part of your IChemE membership.

mycareerpath CPD tool

Once you've graduated you need to take charge of your own learning programme, called Continuing Professional Development (CPD). IChemE members get free access to mycareerpath, a CPD tool to help you plan and record all of your skills and developments. This is great for re-evaluating your CV, but is also a vital part of the process to become a Chartered Chemical Engineer: www.icheme.org/mycareerpath

Accredited Company Training Schemes (ACTS)

IChemE accredits a number of in-company graduate schemes known as ACTS. A full list of these companies can be found on our website. Completing an accredited scheme will ensure you get plenty of good experience in various areas of your company and will also help you on your pathway to becoming a Chartered Chemical Engineer.

TOP TIP

The easiest way to impress an employer is to work hard, complete your degree and keep using your IChemE member resources:

Knovel

The Knovel e-library integrates technical information with analytical and search tools. Log in with your membership number and password and download books, pages and articles for free. Find out more at www.icheme.org/knovel

Journals

IChemE members can now access IChemE journals free-of-charge as part of their membership subscription. Log in to MyIChemE at www.icheme.org and visit the 'My resources' area.

Publications

IChemE members can take advantage of discounted publications including books from leading publishers Butterworth-Heinemann, Mcgraw Hill, and John Wiley. If you're still studying, many of these books will be on your reading list so there are substantial savings to be made.

Events and webinars

Regional member groups and technical special interest groups organise regular events and webinars on a range of topics. Visit www.icheme.org/groupevents to see what's coming up.

Student pocketbook

This e-book is full of useful information, data, concepts and formulas needed during your studies and beyond. Visit www.icheme.org/young-members



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