BIOCHEMISTRY AT KENT

As a biochemist you study the way living organisms function at the molecular level. Study Biochemistry at Kent and you get a solid grounding in biological and chemical disciplines. You also develop the practical and personal skills you need to succeed in your career. Our flexible programmes have options to suit you, whatever your ambitions.
WHY STUDY BIOCHEMISTRY AT KENT?

Flexible programmes
You have the option to transfer on to a four-year sandwich, professional year or year abroad programme if you meet our criteria. From the second year of your biochemistry programme, you can choose some of your modules according to your interests.

Academic support
University is different to school. You need to be self-motivated and well organised to succeed. We help by assigning you an academic tutor and organising peer mentoring. You can also get help with academic skills, such as essay writing, from the University’s dedicated service.

Inspirational teaching
Great teachers inspire enthusiasm and enhance understanding. Whether they’re lecturing on genetics, or helping you develop your lab skills, our staff are skilled at bringing their subject to life and putting you in touch with the latest research.

Professional accreditation
All of our biochemistry degrees are accredited by the Royal Society of Biology and our sandwich degrees have advanced accreditation. This gives you, and potential employers, reassurance about the relevance and quality of your degree.

Work in industry for a year
If you choose to do work experience as part of your degree, you spend a year in a research role (sandwich year) or a professional, non-research role (professional year). The skills you gain put you ahead in the job market, and may even lead to a job offer.

Excellent resources
The School of Biosciences attracts a large research budget, allowing us to provide our students with access to the very latest equipment during their final-year research projects. Excellent facilities on campus include the newly-extended Templeman library.

International links
Join us and you’ll be part of a thriving global scientific community. We have a regular seminar programme, attracting internationally-renowned speakers, and we collaborate with research groups throughout the UK and mainland Europe.

Lively campus
Kent is a campus university, so everything you need is within walking distance. You can watch a play or film at the Gulbenkian arts centre; dance at The Venue nightclub; keep fit at our sports centre and meet friends at one of many campus cafes and restaurants.

Outstanding career success
Employability is a priority at Kent. By studying, you broaden your subject knowledge and sharpen the skills that are useful in working life. You have opportunities to gain work experience and access to careers advice, workshops and employability events.
Benefit from our world-leading research

You learn from leading experts. In the most recent Research Excellence Framework, all of our research was judged to be of international quality. Our research feeds directly into our teaching – all final-year modules are research-led and taught by academic staff with research experience in the subject area. You also contribute directly to our research: through your final-year research project and through the opportunity to apply for one of our summer internships. You could also join the iGEM team, who compete in an international competition to solve problems using synthetic biology (www.igem.org).

Independent rankings

The Complete University Guide 2019
• 17th out of 101 universities in the UK for Biological Sciences

The Times Good University Guide 2018
• 16th out of 100 universities in the UK for Biological Sciences.

Destinations of Leavers from Higher Education
• Biosciences students who graduated from Kent in 2016, and responded to this national survey, were the most successful in the UK at finding work or further study opportunities within six months

Teaching Excellence Framework
• Kent was awarded gold, the highest rating, in the UK government’s Teaching Excellence Framework*

Research Excellence Framework
• Biosciences at Kent was ranked 7th for research intensity by the Times Higher Education following the most recent survey.

*The University of Kent’s Statement of Findings can be found at www.kent.ac.uk/tef-statement
Hannah Reed is in the final year of Biochemistry with a Professional Year.

What attracted you to Kent and to the course?
The course here had everything that I was after, with the added benefit of flexibility to tailor your course to suit your interests after the first year. The student satisfaction ratings for both the course and the university were also impressive. The location was key for me because I could commute from home and save a bit of money.

How have you found making friends when you weren’t campus based?
It’s a different experience living at home but I have made friends easily. I mentored as part of the school’s peer mentoring scheme and this helped me a lot. I have also been to events held by the Biosciences Society and these are also a really good way of making friends while expanding your academic knowledge.

What are your favourite modules?
The ‘Skills for Bioscientists’ module in the first year covered a range of different topics including some basic statistics, which I found really useful, particularly going into a placement year. I have also enjoyed my final-year project, which, for me, was laboratory-based. It was very interesting to be actively involved in research and have the opportunity to apply what you have been taught during your degree.

Tell us about your final-year project?
Myosin VI (MVI) is a backwards motor protein that has roles in transcription. It has recently been shown that MVI and the estrogen receptor (ER) can bind, which is particularly interesting since MVI is over-expressed in breast and ovarian cancer where over-expression of ER target genes is implicated. Therefore, we wanted to further investigate the kinetics of the binding event, with the hope that this can help us better understand the role of MVI in these cancers. This is a new and exciting field of research.

What do you think of the support available?
The lecturers are all really friendly and approachable. Nothing’s too much hassle. I’ve also had an academic adviser who has stayed with me throughout my degree. If I get an exam script back and I’m unsure where I’ve lost marks, he’ll sift through it with me. They can also help with updating your CV and discussing career options.

What was your professional year like?
The professional year is about using science-related skills in a non-laboratory environment. I worked for The Defence Science and Technology Laboratory (Dstl) as an analyst. I used data analysis, problem-solving, logical thinking, organisation, presentation and report writing skills gained throughout my degree to help me.

I wanted to complete a professional year to get experience outside of the laboratory. The beauty of the science degree is that there are so many options out there for you and science graduates are very employable. As a result of doing my placement, I have been sponsored by Dstl and act as a brand ambassador for them while at university.

What do you think of the facilities at Kent?
The library has just been updated, which is nice since I spend a lot of time in there. Also, the new Sibson building was finished when I came back from placement. It’s great to be able to learn in these inspiring environments.

What advice would you give to somebody who was thinking about coming to Kent?
I would say definitely come as Kent’s a really good university and there is a lot of support for you. I would also say that the jump from first to second year is hard, so prepare yourself and don’t think that the first year is a breeze. What you learn in first year does carry forward, even though it doesn’t contribute to your degree mark. In that sense, remember that you need a work-life balance. Sometimes you need to take a break and socialise, at other times you really do need to focus.
CHOOSING YOUR DEGREE

Not sure which programme to choose? Here’s a quick guide to the degrees we offer.

Biochemistry
www.kent.ac.uk/ug/96
As a biochemist you study the way living organisms – from viruses and bacteria to mammals, plants and other higher organisms – function at the molecular level. Biochemistry has a major impact on vital areas such as medicine, agriculture and the environment, so you could contribute to positive change. Biochemistry is an ideal degree if you want a research career in life sciences. The degree is taken over three years, full-time.

Biochemistry with a Professional Year
www.kent.ac.uk/ug/255
You work in a non-research role, such as management or scientific writing, between the second and final years of your degree. This programme doesn’t have a separate UCAS code, but you can transfer on to it from Biochemistry/Biochemistry with a Sandwich Year during your second year (Stage 2). See eligibility requirements below.

Biochemistry with a Year Abroad
www.kent.ac.uk/ug/264
Spend a year studying abroad on this four-year, full-time programme. We have exchange agreements with 30 universities including University of Technology (Sydney, Australia), Boğaziçi University (Istanbul, Turkey) and Mount Holyoke College (Massachusetts, USA). This gives you a fantastic opportunity to immerse yourself in another culture and see how your subject is taught in a different environment. Our partner universities teach in English, so you don’t need foreign language skills to take this programme.

Other degree programmes
The following degrees are also available within the School of Biosciences, with options to study abroad or take a sandwich/professional year.

Biology
www.kent.ac.uk/ug/255
Biology is the study of living organisms and their interactions with the environment. This degree provides a broad survey of the various biological disciplines but with a focus on modern cellular and molecular techniques. You investigate life forms ranging from viruses and bacteria to complex animals and plants.

Biomedical Science
www.kent.ac.uk/ug/263
During your studies you explore the biochemical processes that occur in the human body, learn how they respond to diseases and how this knowledge can be used to identify and treat diseases. In your future career, this scientific knowledge could be put to practical use within medical healthcare or research.

Biomedical engineering
www.kent.ac.uk/ug/2497
This cross-disciplinary programme is designed for students with a strong interest in engineering and bio-medicine. The programme is owned by the School of Engineering and Digital Arts and produces engineers with a solid knowledge in biology and biomedical science.

Eligibility for the Sandwich Year/ Professional Year/ Year Abroad
The Sandwich Year/Professional Year option is available to students who achieve an overall average mark of 65% at Stage 1, and the
Year Abroad option is available to students who achieve an overall average of 65% at Stage 1 and 60% at Stage 2.

Alternatively, you can apply directly for the Sandwich Year and Year Abroad programmes. If you apply directly and meet the requirements of the offer made (such as A level grades) then the Stage 1 and Stage 2 thresholds do not apply.

However, if you miss the requirements and we offer you a discretionary place, the average mark thresholds detailed above will apply, so we can treat all of our students fairly.

Accreditation
All of our biochemistry degrees are accredited by the Royal Society of Biology (RSB) and our sandwich-year programmes have advanced RSB accreditation, in recognition of the additional period of extensive professional practice. These accreditations reflect the relevance and quality of our undergraduate programmes, and are attractive to potential employers.

International students
If you are applying from outside the UK and without the necessary English language qualifications for direct Stage 1 entry, you may be able to take the Biosciences strand of the Kent International Foundation Programme (IFP). You need strong results in your national school-leaving qualifications in biology and chemistry, which will be assessed on an individual basis. For more details, see www.kent.ac.uk/ifp

Need more information?
For more information on Biology, Biomedical Science, or Bioengineering, see www.kent.ac.uk/ug or download the relevant leaflet at: www.kent.ac.uk/studying/leaflets

Your sandwich year/professional year
You have the option of spending a year in industry between Stages 2 and 3, boosting your skills and enhancing your employability. You can undertake either a research role (sandwich year) or a non-research role where you train in graduate-level skills (professional year).

Excellent industry links
Our students have taken sandwich year placements with GlaxoSmithKline, Astex Pharmaceuticals and Astra Zeneca, and professional year placements with Dstl, Pfizer and Sanofi. The School has developed excellent links with employers both in the UK and abroad.

Finding a placement
It’s your responsibility to find a suitable placement, but you are supported by the School and our employability officer in your search. Work placements are usually advertised on company websites. We guide you through the application process, give you advice and feedback on how to write a winning CV, and help you prepare for a successful interview.

Salary and benefits
Students usually work on placement for the whole calendar year. Salary and holiday entitlements vary according to the employer, but many students earn enough to avoid having to access a student loan for that year, and some earn enough to be able to save some of their income.

Keeping in touch with Kent
Your academic adviser keeps in close contact with you during your year away from the University. They check on your progress and visit your workplace. All placement students come back to the School for a day halfway through the year to talk about their work with other students and staff.

Assessment
If you undertake a sandwich year, your work is assessed by a presentation and a written report. These contribute 10% to your overall degree mark. A professional year does not contribute to your degree mark, and is assessed on a pass/fail basis.
YOUR STUDY PROGRAMME

Your studies are divided into three stages: Stage 1, Stage 2 and Stage 3. If you take a sandwich year, professional year, or spend a year abroad, you do this between Stages 2 and 3.

Teaching and assessment
Teaching includes lectures, laboratory classes, workshops, problem-solving sessions and tutorials. You discuss your progress with your academic adviser, who will help you improve your work so you reach your full potential.

Most modules are assessed by a combination of continuous assessment and end-of-year exams.

Stage 1 assessments do not contribute to the final degree classification, but all Stage 2 and 3 assessments do. For details of assessment methods for individual modules, see www.kent.ac.uk/ug

Module information
The module lists below are not fixed as new modules are always in development and choices are updated yearly.

Please see www.kent.ac.uk/ug for the most up-to-date information.

To read a full description of the modules listed, go to: www.kent.ac.uk/courses/modules and search using the module code.

Stage 1
Your modules give you an insight into various biological and chemical disciplines, including biochemistry, cell and molecular biology, microbiology and physiology.

You take the following compulsory modules:
• Biological Chemistry B (BI322)
• Enzymes and Introduction to Metabolism (BI301)
• Genetics and Evolution (BI324)
• Human Physiology and Disease (BI307)
• Introduction to Biochemistry (BI300)
• Molecular and Cellular Biology 1 (BI302)
• Skills for Bioscientists 2 (BI308).
Stage 2
Your second year builds on your existing knowledge to cover areas such as gene regulation, cell biology and metabolism.

You take the following compulsory modules:
• Cell Biology (BI503)
• Gene Expression and its Control (BI501)
• Human Physiology and Disease 2 (BI513)
• Infection and Immunity (BI505)
• Metabolism and Metabolic Disease (BI520)
• Metabolism and Metabolic Regulation (BI521)
• Skills for Bioscientists 2 (BI532)

You also take one of the following:
• Animal Form and Function (BI546)
• Microbial Physiology and Genetics 1 (BI548)
• Pharmacology (BI514)

Stage 3
In this, the final year of your degree programme, you take some compulsory modules, pick three additional modules from an options list, and complete a Research Project.

You take the following compulsory modules:
• Biological Membranes (BI604)
• Proteins: Structure and Function (BI629)
• Research Project (BI600)

You also choose three modules from the following:
• Advanced Immunology (BI622)
• Bioinformatics and Genomics (BI638)
• Biology of Ageing (BI644)
• Cancer Biology (BI642)
• The Cell Cycle (BI610)
• Cell Signalling (BI602)
• Frontiers in Oncology (BI639)
• Integrated Endocrinology and Metabolism (BI626)
• Neuroscience (BI643)
• New Enterprise Development (CB612)
• Virology (BI620).

Research project
In your final year, you undertake a research project. There are three types: laboratory; literature or communication. You choose to focus on an area that interests you.

Choose to undertake a laboratory project, and you carry out real research of interest to your supervisor and their research group. You have the possibility of seeing or discovering something for the very first time and may have your work published in a scientific journal. Both lab-based and computing projects are available

Literature projects give you the opportunity to dig deep into the scientific literature to fully understand an area of research. This includes the analysis of published (and sometimes unpublished) data.

One of the challenges facing scientists is to make their work interesting, accessible and relevant to the public. A communication project can develop these skills and broaden your employment opportunities.
SUPERB STUDY SUPPORT

We’ll support you throughout your time at Kent, from helping you adjust to university study to discussing module and final year project choices with you.

You are assigned an academic adviser in your first year, and they help you get the most from your degree programme.

They meet with you regularly on a one-to-one basis to discuss academic progress, and in small advisee groups to work on academic skills such as essay and scientific report writing, giving presentations and exam preparation.

They will also refer you to other sources of help if you need it.

Peer support
The best advice often comes from people who’ve been in your situation. On our Academic Peer Mentoring scheme, first-year students can request to be matched with second- or final-year students on a similar degree programme.

Peer mentors will help you settle into university life and find your feet. They can help you to discuss ideas and improve your study skills as you progress through your first year.

Study skills advice
Successful students take control of their own learning. Kent’s Student Learning Advisory Service (SLAS) can help you increase your competence and confidence and fulfil your potential. You can request a one-to-one appointment or attend workshops on a diverse range of topics from making the most of lectures to writing well and avoiding plagiarism.

Student support and wellbeing
You might need extra help to get the most from university. If you have a medical condition, specific learning difficulty, mental health condition or disability, the Student Support and Wellbeing team is there to support you. They are committed to improving access to learning for all students at Kent and can assist with many things, including:
• arranging note-takers, signers and other support workers for you
• discussing exam access arrangements
• helping you with emotional, psychological or mental health issues
• applying for relevant funding to support you.

Find out more at: www.kent.ac.uk/studentsupport

DID YOU KNOW?
We offer Summer Internships, giving you the possibility of a paid eight-week research project in one of the School’s research labs.
A SUCCESSFUL FUTURE

What do you hope to do once you have your degree? Whether you have a specific career path in mind or not, we can help you to plan for success in the future.

Build your CV

Your degree studies help you to develop skills such as thinking critically, expressing yourself clearly, solving problems and working independently and as part of a team. These transferable skills are valued by employers and will also be vital if you go on to further study.

At Kent, you have lots of other great opportunities to enhance your skills.

For instance, you could:
- join a society or sports club (even better – get involved in running it)
- volunteer with a community
- work in a part-time job or take up a summer internship
- represent your fellow students as a student rep, or become a student ambassador
- learn a new language or skill with Study Plus.

Getting involved like this means that you can earn Employability Points, which you can exchange for employability rewards. The more points you earn, the more valuable the rewards: we work with local, national and international employers to offer internships, work experience and other activities that prepare you for the world of work.

Experience work

Our programmes include the opportunity to spend a year in industry so that you can evaluate a particular career and gain knowledge of the working environment. We have excellent links with local employers, such as the NHS, GlaxoSmithKline, Pfizer and Eli Lilly.

We also offer summer internships studentships which are paid positions in the School, available during the summer after your second year. Financial support is available from Learned Societies, the Stacey Fund or the School.

Your programme includes laboratory-based practical sessions and training in skills such as essay and scientific report writing, problem solving and critical thinking, setting you up for your placement and future career.

Find a great job

From the School of Biosciences, about 30% of our graduates go straight into scientific jobs such as research and technical support in hospital or industrial labs, scientific writing, clinical trials and science communication.

About 40% of our graduates go on to take a higher degree and become senior scientists. The remaining 30% of our graduates go on to work in non-scientific areas, but benefit from the skills developed during their studies.
Meet David Anderson, who graduated in 2017 with a BSc in Biochemistry with a Professional Year. He currently works as a Lab Technician at Camden Town Brewery in London.

What attracted you to studying Biochemistry at Kent?
I had always loved Canterbury, but it wasn’t until I visited for the biosciences open day that I realised I needed to study there. I was sold the moment I saw the facilities and how friendly and helpful the staff were.

What did you most enjoy about your degree programme?
I hate to sound cheesy, but I enjoyed the whole degree! If I had to choose I would say that I most enjoyed the variety of modules and the wide range of final-year projects to pick from.

How well did the School support you?
I had plenty of support from lecturers and advisors. My first-year grade was lower than I had hoped, so the first thing I did was contact my academic advisor. He talked me through the options that were available and fortunately I was still able to do a professional year in my third year.

Which were your favourite modules, and why?
The proteins and the immunology modules. Proteins had a variety of different lectures taught by specialists in that field. The immunology lectures were really interesting and taught in a great way that made me eager to learn more in my own time.

What were the other students on the course like?
They were great – many were older students as well. Everyone was incredibly friendly and very keen to help. We would set up days in the library to go through work and prepare for exams.

Where did you spend your professional year, and what did you do?
I worked in a brewery in Leuven, Belgium, which is famous for being the birthplace of the beer Stella Artois. My role was lab technician in the quality control department. I tested samples to ensure that the beer was OK to be sent out. And I also worked within the Phys-Chem side, testing components like alcohol content, bitterness units and sulphites. Half my time was spent working within the microbiology side, plating up samples, performing viability tests on yeasts as well as propagating new generations of yeast to be used.

What were the highlights of the year?
The two projects that I managed: they gave me a lot of independence and confidence in my ability to work.
This helped prepare me for my final-year research project and without it I really don’t think I would have done as well as I did!

What’s your current job role?
I am a Lab Technician at Camden Town Brewery. I work within the quality team and have been a key player in setting up large aspects of the lab, including in-house microbiology tests as well as implementing new chemical tests for our beer. I help to start production and ensure that only the highest quality of beer is released.

What do you most like about your current job role?
My current role gives me a lot of opportunities to learn. Even though I didn’t go on to further studies I’m still learning and to me that’s the best part. Starting as a lab technician doesn’t limit me to the lab as well. I am currently taking courses to learn more about brewing and will be shadowing brewers for a day.

How did studying at Kent help prepare you for your career?
Without Kent I would not have the job I have now. Studying at Kent taught me a great many things including technical skills that I use daily, and the theory needed to do my job. My degree made me think about how I can apply my knowledge to anything I do and taught me the importance of seeing the whole picture. My professional year has laid the foundation for my success here at Camden Town Brewery.
Choosing a university is a big step, so it’s important to find out as much as you can before you make your decision. Come and visit us to see what we can offer you.

Open Days
Open Days are a great way to find out what life as a student at Kent is like. For instance, you can:
• learn more about the course you are interested in at a subject presentation
• ask questions – talk to the academic teams at the information stands
• visit our teaching labs and find out about some of the research going on in our research labs
• find out about student finance, opportunities to study abroad and extracurricular activities such as Kent Sport.

Explore the campus at your own pace on the self-guided walking tour. You will be able to visit different types of accommodation, chat to current students and enjoy the stunning views over the city of Canterbury.

Open Days are held in the summer and autumn. Book your place at www.kent.ac.uk/opendays

Applicant Days
If you apply to Kent and we offer you a place (or ask you to come for an interview), you will usually be invited to an Applicant Day. Applicant Days run in the autumn and spring terms and are an opportunity to find out about the course in more detail. You spend time with your academic school meeting staff and current students, and take part in activities that give you a flavour of your prospective course and university life.

Informal visits
If you can’t make it to an Open Day or Applicant Day, you can still visit us. We run tours of the campus throughout the year.

If you live outside Europe, we appreciate that you might find it difficult to attend our scheduled events, so we can arrange a personal campus tour for you and your family.

Let us know you’re coming
Scheduled tours and personal campus tours (for international students) need to be booked in advance – you can do this via www.kent.ac.uk/informal

Meet us in your country
Our staff regularly travel overseas to meet with students who are interested in coming to Kent. We also have strong links with agents in your home country who can offer guidance and information on studying at Kent. To find out more, visit www.kent.ac.uk/courses/international
Self-guided tours
If you prefer to explore on your own, you can download a self-guided walking tour at: www.kent.ac.uk/informal or pick up a copy from us.

A self-guided audio tour is available too, which allows you to learn about Kent without even leaving home. See: www.kent.ac.uk/courses/visit/informal/audio-tour.html

Explore online
If you can’t come and see us, you can find out more about the academic team, the course and events in the department and School online at: www.kent.ac.uk/bio

Keep in touch with us via social media: www.facebook.com/biounikent twitter.com/@biokent

Contact us
If you would like more information on Kent’s courses, facilities or services, please contact us on: T: +44 (0)1227 768896 www.kent.ac.uk/ug

Location
Canterbury

Award
BSc (Hons)

Degree programmes
Single honours (3 years)
• Biochemistry (C700)

Single honours (4 years)
• Biochemistry with a Sandwich Year (C702)
• Biochemistry with a Year Abroad (C703)

Offer levels
Biochemistry (C700): BBB at A level including Chemistry grade B and either Biology or Human Biology grade B or Applied Science Double Award at BB including the practical endorsement of any science qualifications taken. GCSE Mathematics at grade 4/C.

IB 34 points overall or 16 points at HL, including Chemistry and Biology 5 at HL or 6 at SL, plus Mathematics 4 at HL or SL.

Other qualifications
Access and BTEC Level 3 Extended Diploma applicants are assessed on an individual basis, please contact us for more information

Sandwich/Professional Year
You have the opportunity to undertake a one-year work placement between Stages 2 and 3. For more information about this, see p9.

Accreditation
All Biochemistry degrees are accredited by the Royal Society of Biology. Biochemistry with a Sandwich Year has advanced accreditation.

Offer levels and entry requirements are subject to change. For the latest course information, see: www.kent.ac.uk/ug

This brochure was produced in June 2018. The University of Kent makes every effort to ensure that the information contained in its publicity materials is fair and accurate and to provide educational services as described. However, the courses, services and other matters may be subject to change. For the most up-to-date information, see www.kent.ac.uk/ug and for full details of our terms and conditions, see www.kent.ac.uk/termsandconditions

For the University to operate efficiently, it needs to process information about you for administrative, academic and health and safety reasons. Any offer we make to you is subject to your consent to process such information and is a requirement in order for you to be registered as a student. All students must agree to abide by the University rules and regulations at: www.kent.ac.uk/regulations
COME AND VISIT US

To find out more about visiting the University, see our website:
www.kent.ac.uk/visit