Welcome!

A warm welcome to both our new and returning students, the first edition of our Student newsletter and welcome to a great city, a great university and a fascinating subject.

Newcastle, the city, and Newcastle University have longstanding reputations for engineering. A substantial part of the University’s origin is in fact as an Engineering College, Armstrong College (1871). The original “Armstrong” college is now the Armstrong building on the main quad of the campus, founded by Lord Armstrong, the first engineer, or scientist, to enter the House of Lords.

Armstrong himself was one of the most innovative engineers of his time – and one of the richest. I encourage you to visit his home at Cragside, the first hydroelectrically lit house in the World. The light bulbs were provided by another famous local innovator, Joseph Swan, the inventor of the light bulb (not Edison!).

Clearly, you can earn a lot of money and esteem from engineering, whilst doing interesting things! Try and emulate Armstrong (in your own way).

Make the most of this opportunity (we will help you to do this, of course). It will be worth it: an engineering degree from Newcastle is a mark of quality and will open many doors. But make sure you enjoy your time here too. An engineering degree is hard work, but all previous undergraduates seem to have found ways of enjoying themselves too!

~Professor Adam Harvey, Head of School

“Welcome to a great city, a great university and a fascinating subject”

- Head of School

In This Issue

- Meet your Student Reps and our new academics!
- Intermural Sport Updates.
- Social events and Job opportunities
Class of 2016!

Congratulations to all our students from CEAM who graduated on Tuesday 19th July 2016. We couldn’t have asked for a brighter and nicer day - although we can all agree that a slightly cooler day would have been much appreciated! It was brilliant to see both staff and students turning up in great numbers and this was one of the biggest school photos to date!

After catching some rays and feeling a like a snowman melting in the sun, it was safe to say that a cool glass of prosecco was well deserved by all our graduates and staff to round off a great academic year.

Spotted and tweeted by Dr Steve Riddle from Computing Science in Claremont Tower

“Hot day for nclgrad Graduation photo pic.twitter.com/Gdren7Ujy1”

Congratulations! Class of 2016 and Good Luck for the future!
A lovely afternoon was had by all at Northern Stage and was topped off with a delicious lunch provided by McKenna’s. There was a final closing speech from our Head of School, Professor Adam Harvey who also presented our Student Awards—Well done all!

**Student Awards 2016**

For the School of Chemical Engineering and Advanced Materials

**Gareth Bond:** Stage Three Top Student

**Catherine Hallam:** Stage Four MEng Top Student

**Catherine Fenby:** Stage Four MEng Industry Top Student

**Catherine Hallam:** Stage Four MEng Research Project

**Sebastian Lunt:** Stage Four MEng Research Project (Poster Presentation)

**Joseph Emerson:** Stage Four MEng/Stage Four MEng Industry Student with the Best Final Year Control/Measurement project
Meet Dr Mohamed Mamlouk!

Not wanting to leave such a great University, Dr Mamlouk joined us as an academic in September after completing his PhD. Dr Mamlouk specialises in electrochemical engineering with a focus towards energy (energy generation/storage), so any questions on this topic, you know where to direct them! We asked Mohamed some questions, here is what he had to say...

What is your Scientific hero?
Galileo and Einstein not just because of the significance of their work but because they persisted with their theories despite the huge resistance from the scientific communities.

What superpower would you have?
Ability to spread happiness.

Do you have any hobbies?
Travelling, hiking, and cooking. I particularly love the national parks in the US. I enjoy horse-riding (but not anymore)!

If you had a time machine, what point in the past or future would you visit?
Hippies era of the 1960s. I am consistent here - happiness and party!

What was your first job?
In Food Packaging (breakfast cereal boxes)

Do you have a hidden talent? If yes what is it?
DIY (plumbing, electrical, joinery and car mechanic) not always to high standards!

Any other fun facts about yourself?
I enjoy fine dining and food from around the world. My favourite though is cheese and wine.

What is your favourite/fun memory as a student?
The fun I had in my first year in the Toon. My favourite place was Baja Beach Club which is closed now. Back in the day at the students union was fun with all drinks for £1! But best of all I still managed to complete my MSc with distinction.


What was your first job?
I was a postdoc in the US. I worked at NASA Ames Research Center on molecular simulations of peptide channels. The idea was to understand their possible role in the evolution of contemporary ion channels in cellular membranes.

Do you have a hidden talent? If yes what is it?
Maybe I do, but it's so well hidden that I haven't found it myself yet!

Any other fun facts about yourself?
I'm getting old, but that's no fun.
Hi.

I’m Molly Bell and I’m the CEAM School Representative 2016/17. This role involves representing students across all courses within CEAM, discussing issues and offering feedback to members of staff and to the university itself. Becoming a rep is a great way to get involved in university life and be the voice of students on your course. As a member of the Student Staff Committee, I (along with the stage reps) provide a crucial link between yourself, school staff and the university.

If you have any comments/issues regarding university life then please let me know via email (m.c.bell1@ncl.ac.uk) or a chat in person!

Looking forward to working with you all!
Studying Late?

SafeZone is a free new app for all students and staff that connects you directly to the university security team when you need help while you are on campus. Whether you are studying late on campus or walking home after a sociable occasion, the Safe Zone app is truly worth getting.

How does it work

Safezone App only shares your location with the Campus Security Team when you press one of the three Alert buttons (First Aid, Help & Emergency)

- Lets you GET HELP QUICKLY in a personal Emergency, or if someone needs First Aid or General Help.

- CHECK IN when you are working alone or in high risk areas, to share your status with the response team.

- Receive NOTIFICATIONS so you know what to do in an emergency.

SafeZone Areas

The SafeZone service is specific to SafeZone Areas that have been defined by your campus security team. While you are within one of the defined areas, the campus security team will respond to your alarm or call.

For more information please see: http://www.safezoneapp.com/
The Challenge:
We’re living in an age where automatic processes designed to save energy are becoming increasingly widespread: think of smart appliances, smart meters, smart grids and even entire smart cities. What else could we be doing to reduce energy wastage, and lower the demand we place on the National Grid, both at home and at work?

Deema Khunda rose to the challenge and submitted her SEGU idea and was runner-up in the Telegraph Stem Award 2016!

The Telegraph Stem Award 2016
Deema Khunda (Current 2nd Year MEng Student)
Runner-up

Idea: SEGU (Stirling Engine Generator Unit)

“ The basic principle of the Stirling Engine is that externally heated gas is pumped around a system to drive a flywheel which is, in turn, attached to a DC generator. The Stirling Engine has a “hot” cylinder and a “cold” cylinder. In practice (with the gamma engine) the temperature difference can be as low as 5°C.

The larger the temperature difference between the two plates of the engine the more efficient the energy provided. The project proposed in this essay is to use the mechanical energy of the rotating wheel to reproduce heat and electrical energy to power low voltage appliances in the household and in residential areas. Grid electrical energy is dissipated into waste heat energy by a number of electrical equipment in houses. Heaters, refrigerators, lights and many other convert some of the electrical energy supplied into waste heat. This heat could be recycled in a system to reconvert it to electrical energy efficient enough to charge PC, Mobile phones, Kettles, T.V and lights in other part of the house. A Gamma Type sterling engine bottom plate is thermally in contact with the heat producing surface from the refrigerator and the sterling engine begins to produce mechanical work due to temperature difference between the two plates.

There is an even a more eco-friendly SEGU application and this would make use of diurnal and seasonal temperature variation in the typical home, for a high percentage of the year, there is quite a large difference between outside and inside temperatures (certainly more than the 5°C needed to power a SEGU). This unit could be fitted in an unobtrusive location. The Stirling Engine has no preferred direction of rotation and the same unit could be used if it were hot outside and cooler inside (e.g. Africa, the Middle East) or cold outside and warmer inside (e.g. high northern or southern latitudes). The same unit would have worldwide application.”
The Competition

With over a 1000 applications, competition was tough. Deema was one of the five finalists to qualify in the energy category. Deema presented her idea for answering the question of "finding new ways to reduce the demand on the National grid" to the judging panel on 7th of March 2016, in Semta head quarter SMMT 71 Great Peter Street, London. Here is what Deema had to say about her experience:

Presenting challenges & improvisation

I brought a small sterling engine which can be operated and heated using small temperature differences between its two plates. I remember while I was presenting, to get it to work I had to use the tea cup of one of the judges on the panel to heat its plate and keep the other at room temperature. After 20 minutes he had to order another tea as his previous one had lost all its heat energy to operate my sterling engine.

Ideas and Inspiration

I received help in understanding heat engines and how they work from my Chemistry teacher in INTO Newcastle university Dr John Timney, he was my inspiration in using the Sterling engine in household to produce enough voltage to reduce demand on the national grid. We worked on the Idea together and developed the concept of SEGU.

Could you give it a go?

I would definitely encourage students to participate and use their creativity in coming up with new ideas and solutions, scientific discoveries thrives on finding unconventional methods and using different thinking process. The bigger platform of thinkers and innovators you have, the more likely you are to reach to suitable practical solutions. Science and Technology is battle of ideas and there is no limit to human imagination.

Stirling Engine in Operation

1. Heat from an external source is applied to the air chamber of the Stirling Engine.
2. The applied heat causes the gas within the air chamber to expand. This pushes the power piston outwards and turns the flywheel.
3. The displacer piston moves forward in the air chamber, forcing the hot air backwards into the area with the heat sink. This causes the air to cool and pulls the power piston inwards.
Considering doing a PhD?

Here is what some of our current PhD Students had to say.

Jonathan McDonough

Completing his undergraduate degree in Chemical Engineering at Newcastle (from 2009 - 2013), Jonathan has just finished his 3rd year of his PhD.

Jonathan is currently working as a research assistant for 10 months with Professor Adam Harvey.

Following this 10 months, Jonathan will be ready to submit his final thesis.

What was the Application Process like?

Firstly, I looked at the research areas available in CEAM, and contacted various members of staff whose research interests aligned with my own. This allowed me to meet my supervisor. I then officially applied to the PhD programme, which required a personal statement and CV. Concurrently, I applied for funding (separately from the PhD application) from the EPSRC. Therefore, acceptance on to the programme depended on both the PhD and funding applications.

How did you find going from an Undergraduate to a Research Student?

There is quite a large difference between undergraduate and postgraduate study. The biggest difference is time management. A typical undergraduate course involves lectures, seminars, tutorials, labs, etc. and the completion of regular assignments with two exam periods each year. Whereas, as a PhD student, apart from yearly progress reports, there is no obvious deadline meaning I must carefully manage my time myself. This involves scheduling lab work, writing, meetings, career workshops, demonstrating, etc. to ensure I progress at a suitable rate. My supervisors help in this regard.

Another difference is that as a research student, I am treated more as a member of staff instead of a student, meaning my knowledge/advice feel valued. In CEAM, I also share a professional office space with other PhD students. This means I can speak to other students at varying stages of the degree, who all have their own areas of expertise. Finally, there are many opportunities available for professional development, including: giving presentations to my research group and school, demonstrating to undergraduates and attending career and PhD advice workshops (PGRDP).

What area are you specialising in?

One of my favourite parts of the PhD is the freedom to pursue areas that I find interesting. The global objective of my PhD is the application of mesoscale oscillatory baffled reactors to process development. My PhD has incorporated a diverse range of topics involving areas such as: fluid mechanics (simulation and experimentation), fluidics, reactor engineering, heat transfer and even 3D printing.

Construction of a fluidic oscillator using 3D printing.

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How have you found the PhD so far / is it everything you thought?

The area that I thought I would struggle in is the development of new ideas (as the ultimate goal of research is to expand knowledge). However, I have found that with the guidance of my supervisors, over the course of three years I have transitioned into a researcher capable of identifying potential new research directions, and learned many new research skills. These include better knowledge for setting up robust experiments, new data analysis methods and research management (publications, conferences, etc). Additionally, I have improved my problem solving skills making the PhD very rewarding.

Do you have any future plans once you have finished your PhD?

My current plan is to continue in academia. I believe the PhD programme has given me the skills needed to achieve this. For instance, I have published several academic papers in reputable journals and also attended international conferences. Additionally, I will soon be undertaking a short research assistant position with my supervisor, whilst writing up my thesis, which will allow me to develop other vital skills (including grant applications and research management).

Is there anything else that you think would be useful for students to know who are considering a PhD?

To my knowledge there are a wide range of funding opportunities available, including: SAGE DTA, EPSRC, PhD projects with attached funding and self-funding. For those interested in a PhD but with limited knowledge of what to study, it may be worth investigating some PhD projects with attached funding. I think it is also necessary to meet with any prospective supervisors to ensure compatibility.

I would not recommend a PhD for anyone unsure of what to do in the future, as I have seen several people become disinterested in the work later down the line. For these situations I would recommend at least pursuing other options first (e.g. work in industry); there is no barrier to returning to study a PhD later (as many of my fellow PhD cohorts have done).
What next after graduation?

Martyn Dixon
Martyn completed his MEng at Newcastle University. Graduating from Newcastle University in 2015, Martyn has spent the past year working for WHP.

I decided after finishing university to take a few months off from work and studying to relax and recharge. I was lucky as I was recommended to a role by a classmate so avoided having to go through a lot of application processes. The role I landed was as a Graduate Process Engineer at a local engineering consultancy which specialises in design and fabrication for a wide range of industries but mainly pharmaceutical and biotechnology.

The job role I undertook involved design work as well as hands on practical site work so I had a good technical basis from my studies and found that I had developed a lot of the vital soft skills required through various other roles I had held at university including serving on society committees and working as a student ambassador.
The challenges at work change from day to day but normally there are two types of day. Day 1 involves sitting at my desk helping with design / commissioning documentation which includes completing / updating P&IDs or writing testing documents. Day 2 involves spending time at our Technical Centre or away on Site. This could potentially include a wide range of activities including checking that skids or process systems have been correctly built and that they operate as expected. It may also include commissioning and validating a system ready to hand over to a client. The main things I enjoy about my job is how varied the role can be ranging from front end design through to final commissioning / validation. It allows me to see a project through from inception to fully built and operational. The only drawback is that because of the industry the amount of documentation required is very large so it can be a difficult balancing act ensuring you’ve completed a project to time whilst also ensuring all the correct documentation is present and has been approved by ourselves and the client.

I would not be able to fulfil my current role without a Chemical Engineering degree as it is vital in helping my understanding of the processes I visit on-site and I would not be able to complete any designs without the knowledge I gained throughout the degree. Chemical Engineering also taught me some vital non-technical skills including time management, especially when you have several projects on the go at once, and the ability to work within a team because to get a project to completion you have to be able to work with a large multi-disciplinary team including members from my own workplace and from the client’s. The major piece of advice I would give to an aspiring chemical engineer is to try and get some work experience whilst at university even if it is not a full year placement. The skills you will learn will be invaluable whether you return to that workplace or move on somewhere new after university. It will also provide an appreciation of what engineers do in the workplace whilst also allowing you to see a specific industry in more detail especially because there are such a wide variety of industries available to graduating engineers it’s good to try and narrow it down to the ones for you.

The main advice I would give outside of your degree is to enjoy your time at university and get involved in as many things as possible, join all the societies and sports teams you can, because not only will you get to meet a wide host of people you will also develop skills that will be vital in your future work. Also don’t get down-hearten if you don’t get your dream job straight away, the application processes can be long, tedious and disheartening but be patient the ideal opportunity will come around.

“Get some work experience… the skills you learn will be invaluable”
Within the school of Chemical Engineering & Advanced Materials, I am specialising in electrochemistry looking into aluminium batteries, in essence to make them better for use worldwide as they are a cheaper alternative to lithium. I decided to do a PhD, not only to get the almighty letters ‘Dr’ in front of my name, but to help contribute something to the world. Applying for a PhD was as simple as filling in any form once the pre-requisites grades were met with the most difficult aspects being the personal statement and whether or not you need to write a proposal for the research topic. Luckily for me no proposal was necessary.

A month into it and I am living up to the ‘research student’ name. There is less hands-on experimenting as of yet but that will come later once research has provided me with a foot on which to stand. Due to the extremely academic nature of PhDs, I think will want to get out into the world once I have completed it, to either put my new knowledge to practical use or to possibly consult. If you are considering a PhD I will say this, make sure you are knowledgeable about your chosen speciality and are going to enjoy researching it for the years to come.

Liam Plunkett

Completing his BEng at Newcastle University, Liam then went on to completing a MSc in Sustainable Chemical Engineering before starting his PhD.

Liam is currently in his first year of his PhD here at Newcastle University—this is what he had to say so far.

Graduate Opportunities

Looking to get some work experience or a graduate job in Engineering?

There are several opportunities to search for part-time, work experience placements and graduate job opportunities on the Newcastle University Careers Service webpage. Here are just a few...

ATKINS (Warrington)

Process/Chemical Engineering 2017

Closing Date: 21/12/2016

Our Infrastructure Engineering practice is the ideal place to start your career as an engineer. So, join our award-winning Water, Ground and Environment business and help us to deliver innovative solutions to the world’s most complex engineering, sustainability and environmental challenges.

Our process engineers work on a wide range of projects with water companies in the UK and beyond. We design innovative solutions for pumping stations, pipelines, cooling water systems and water and sludge treatment. We support capital projects including new builds and refurbishments. We also solve operational problems out on site.

How to Apply:
**Johnson & Johnson (Leeds)**

**Engineering & Science Graduate Programme 2017**

*Closing Date: 31/12/2016*

**Main duties and responsibilities:**

- **Materials:** Supporting Product and Process material supply i.e. Polyester, adhesives, precious metal technology with a working knowledge of the mechanics of materials and material performance.

- **Systems:** Work within the Manufacturing Engineering team to support the implementation and maintenance of data systems and integration with automation based control.

For more information and how to apply: [http://www.jjuniversityrecruitment.co.uk/programme-engineering.html](http://www.jjuniversityrecruitment.co.uk/programme-engineering.html)

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**REECE GROUP (Newcastle)**

**Engineering Graduate**

*Closing Date: 31/03/2017*

The Reece Group is a North East-based family owned engineering group. Our operating businesses provide products and services across the globe in the defence, oil and gas, subsea, food processing and road construction markets.

The scheme will be based around 4 x 6-month placements, moving around the Group’s different businesses, learning different types of job roles and functions. This training plan will be tailored to you, and would be agreed at the beginning of your scheme.

For more information: [http://reece-group.com/careers/](http://reece-group.com/careers/)

How to Apply: Email your CV to: graduates@reece-group.com

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**NISSAN (Sunderland)**

**Engineering Graduate 2017**

*Closing Date: 31/01/2017*

Combining technical know-how with hands-on expertise, our engineers define the processes and facilities needed to achieve production objectives. We procure and install them to achieve maximum output and continue to support all areas of the manufacturing operation, ensuring the seamless production of some 500,000 cars every year. A key function offering a full spectrum of career opportunities covering Mechanical, Electrical and Chemical Engineering.

How to Apply: careersatnissan.co.uk

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**Moeschle (Sheffield)**

**Trainee Graduate Engineer**

*Closing Date: 3/12/2016*

Moeschle UK [http://www.moeschle.com/en](http://www.moeschle.com/en) is a leading designer, manufacturer and supplier of stainless steel tanks and containers to the food and drink, chemical, confectionary and pharma sectors. Our clients range from small craft brewing and distilling companies up to ‘blue chip’ multinationals. We are offering a recent graduate or post graduate in Chemical Engineering the opportunity to join our UK Head Office team in Sheffield under a structured graduate trainee programme.

How to Apply: If you feel that you have the required drive and attributes to carry out this exciting and challenging role, please email your CV with a covering letter, setting out why you want to work for us, to Martyn Potter martyn@moeschle.co.uk
CEAM IT Clinic

**Location:** CEAM IT Support Office C403, Merz Court

**Launch Date:** 21st November 2016

**Time & Date:**
- Every Monday 14:00 — 15:00
- Every Thursday 11:00 — 12:00

**What we provide:**
- Drop in sessions
- Troubleshooting advice for personal laptops and tablets
- Support request queries
- Help and advice for IT related issues/problems
- General smartcard queries
- Assistance with general IT tasks such as connecting your device to the University’s Internet and setting up your University email on to your phone

For additional information and any queries about the IT Clinic, please contact CEAM IT Support via [ceamitsupport.ncl.ac.uk](mailto:ceamitsupport.ncl.ac.uk)

Please note that this service is only available to Chemical Engineering and Advanced Materials staff and students.

*CEAM IT Support Office C403*  
*School of Chemical Engineering & Advanced Materials*  
*Merz Court*
What a great achievement—well done CEAM!

What is the NSS?
The National Student Survey (NSS) gathers students’ opinions on the quality of their courses. The purpose of this is to contribute to public accountability, help inform the choices of prospective students and provide data that assists institutions in enhancing the student experience.

How did CEAM do?

Results from the 2016 National Student Survey
Chemical Process and Energy Engineering

We are above the sector average in all 7 areas, notably for Academic Resources, Academic support and Overall Satisfaction in the School of Chemical Engineering & Advanced Materials. Well done to all who contributed to teaching and learning in 2016 — what a great achievement!

“Overall I am satisfied with my course”
91% agree (Sector average 83%)

“Assessment arrangement & marking have been fair”
81% agree (Sector average 73%)

“I have been able to contact staff when I need to”
95% agree (Sector average 88%)

“I have been able to access general IT resources when I need to”
97% agree (Sector average 91%)

“I have been able to access specialised equipment, facilities or rooms when I needed to”
93% agree (Sector average 85%)
CRAFT BEER
CHRISTMAS EVENT

WEDNESDAY
14TH DECEMBER 2016
12:30 - 20:00
AT THE VENUE (NUSU)

STUBREW

EARLY-BIRD TICKETS
£3.00 + BOOKING FEE

STANDARD TICKETS
£5.00 + BOOKING FEE

FEATURING

ALMASTY BREWING CO
BEA SOCIAL BREWING
ERRANT BREWERY
FLASH HOUSE BREWING CO
TWO TWO
NORTHERN ALCHEMY
Three Kings Brewery

ADDITIONAL GUESTS TO BE CONFIRMED
FOLLOW US @STUBREWNCL FOR THE LATEST ANNOUNCEMENTS

NUSU
NEWCASTLE UNIVERSITY STUDENTS’ UNION

WWW.STUBREW.COM
We will be posting regular updates throughout the season on the team’s progress on the Facebook page!

ChemEng FC

Patrick Donachie & Rob Bayram

The transfer window has shut and the ChemEng FC team for the Saturday intra-mural league has been finalised. We would like to thank everyone that came down to trials to make it extremely competitive, and ultimately left us with some tough decisions to make. After finishing last season as runners up in the league and with recent good cup runs, we’re aiming high this year and are wanting to win it all! We quickly flew to the top of the league after our first game of the season with a 6-0 thumping of Bathalona FC. A great way to start the season considering all the goals came from ChemEng FC debtants Angus Findlay (2), Ismail Mohamed, Joseph Worley, Yunus Ahmed and Ian Rye Carriegas, with a clean sheet to really put the icing on top of the cake.

Although the opportunity to get involved with the Chemical Engineering Saturday intra-mural team may have passed, as well as the many other intra mural football teams and leagues (there’s more 11-aside, 7-aside, 5-aside, futsal you name it), the society typically arranges 5-aside football tournament days throughout the year so keep a look out on the Facebook page and in emails to get involved!
The Engines RFC is a student run rugby club, playing in the intramural league at Newcastle University. Players represent a wide range of subjects, but has a core base of engineering students across all disciplines offered at Newcastle.

The intention of the 2015/16 season was to rebuild and recruit new players as a number of senior members had graduated the previous year. The recruitment push paid off with a huge number of talented players signing up, but the team still had to gel and after only a couple of training sessions were scheduled to play the opening match of the season.

The campaign kicked off against Bio-Sci Medics, with nearly 10 players making their debut. After a nervous start The Engines trailed at half-time 17-0, but a spirited 2nd period saw them pick up a losing bonus point, eventually going down 24-17. It was an encouraging start, proving that the boys were willing to fight when the going got tough, and had plenty of character.

A huge commitment was made in training, and our defence soon became perfectly organised and fierce. A few social activities brought the team close together, building trust and improving on-field communication which made our defence near impenetrable.

**Best performance**

The best performance of the season was against the eventual league winners, the intrepidly named Cheeky Ladies. After conceding two early tries the boys rallied to make a spirited comeback - in the final play a penalty kick cannoned off the crossbar denying The Engines their first win, final score 12-10. The Engines were the only team in the league to pick up a losing bonus point against the Cheeky Ladies, and only one of two teams to prevent them securing a winning bonus point which is a tribute to the commitment of the lads.

The Engines secured their first win of the season against the Agrics 2, and finished 6th overall in the league. This match however was overshadowed by the passing of the Agrics 2’s captain two weeks later, Rob Stephenson who epitomised the friendliness and passion of intramural sport at Newcastle University and will be greatly missed.

This season would not have been possible without the generous backing of our sponsors. A huge thank you to British Gypsum, Peacock Salt and the departments of Chemical, Civil, Electrical and Mechanical Engineering at Newcastle University for your support.

**Wanted to get involved?**

If you would like to get involved with The Engines, please contact Rob Wylie (R.C.Wylie1@newcastle.ac.uk) or Olly Myers (O.Myers1@newcastle.ac.uk).

Training takes place on a Wednesday afternoon at West Jesmond playing fields.
Net Energy  By Molly Bell

The CEAM netball team - Net Energy - is one of the twenty six teams that participate in the intra mural league, held at the on campus Sports Centre. This involves playing weekly games against other societies and courses along with a few tournaments throughout the year.

Last academic year we had a squad of 20, allowing us to enter a first and second team. This ensures that people of all abilities can take part, from experienced players to those who have never played before.

In February of this year the team travelled to Manchester to take part in the annual Frank Morton’s sports day. After competing in a tournament against various other university teams, Newcastle emerged victorious on the day, remaining unbeaten.

Towards the end of last term the team were worthy winners of the university’s first ‘Campus Games’, receiving £500 worth of netball kit courtesy of Mizuno. The new shirts were designed by captains and should be with us before the next season starts.

Overall, the netball team is an excellent way to keep fit and socialise with girls on the course from different year groups. We host termly socials and plan to organise some training sessions in preparation for the season ahead.
Outside of Merz Court, 1965

Do you have anything you would like to include in the next Semester 2 newsletter? Please email reception.ceam@ncl.ac.uk.