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UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

University College Cork

Process & Chemical Engineering

21 YEARS OF GRADUATES REUNION

Maryborough House Hotel
Friday 4th January 2019



21 Years of Graduates
PROCESS & CHEMICAL
ENGINEERING
1997 - 2018

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh







Maryborough House Hotel



Welcome

by Prof. Edmond Byrne

We are genuinely honoured and delighted to welcome you to this celebration of 21 years of 'Process Engineering', as graduates of both Chemical & Process Engineering and Food Process Engineering degrees at UCC. Congratulations, we have come of age! While the department had existed in one form or another since its inception as Dairy Engineering in 1926, it really was put on the map with the introduction of the Food Process Engineering degree 25 years ago in 1993. This followed the development of a number of degree programmes out of the old Dairy/Food Science Faculty. The programme then evolved into a Bachelor of Engineering in Process & Chemical Engineering from 2005 (the department had changed name from Food Engineering to Process Engineering in 2001). Thus we are in effect having a double celebration this evening: 25 years since the inception of your degree and 21 years of graduates!

The programme, and its graduates have gone from strength to strength over these past twenty one years; there have been over 400 graduates during that time (of which 25% have been female – see later in this commemorative booklet), representing an average rate of 20 graduates per annum, while this number has shot up in recent times. The result is that we are expected to welcome half that amount of graduates to our alumni family over the next four years, so that by 2022 our Alumni numbers will shoot up to over 600. The current popularity is due in part to a robust employment landscape for process and chemical engineers, in particular across the bio/pharmachem sector, and among the design and consultancy firms that support this sector, but also across other areas such as food and drink, where there has been continuing strong growth in the traditional industries of whiskey distillation and dairy over the past several years. This has led to a situation where in recent times more incoming UCC engineering students wish to study Process & Chemical Engineering than all the other engineering disciplines combined – a long way from the state of affairs for many years when 'Process' students were too often seen as being the less prevalent (if not relevant!) engineers by comparison with the bigger, and better resourced Elec and Civil engineers!

This situation has not come about without its difficulties however, not least in terms of supporting the students with adequate human and other resources. We have therefore agreed within the School of Engineering to a resource based quota of students coming into second year from a common first year engineering programme at UCC from 2019. 2019 also brings some exciting developments to the programme. We are aiming to roll out a new integrated five year Masters (ME) programme, aimed at meeting contemporary CEng status academic requirements. While the four year BE option will remain, this new standard pathway provides students (and employers) with the opportunity of a longer eight month placement from January of year four, as well as a decoupling of the design project and research project. This is in

line with current trends in engineering education across the state and will also help us copperfasten our full programme accreditation status with both the Institution of Chemical Engineers and Engineers Ireland, the former of which currently recognises the programme as being at full MEng level.

While we were the fourth process & chemical engineering degree in Ireland (behind UCD, QUB and CIT), and the second in Cork, we pride ourselves on a number of distinct features which permeate throughout the programme to its very context and ethos. These include a strong and innovative design component, the development of communication & teamworking skills, a strong sustainability ethos (the programme won the 2016 IChemE Sustainability Teaching Award, beating off strong competition from both the University of Manchester and the University of Melbourne), and above all, for an ongoing dedication and commitment to teaching and our students' learning. We also have a particular breadth and expertise in mechanical design of process equipment and in pharmaceutical and biopharmaceutical engineering (and, to a greater extent historically, in food engineering). Ultimately though, the finest aspect of our programme is the quality and dedication of our students, all four hundred plus of you over the past quarter century, which of course is why we are here this evening, to celebrate your work and achievements, and recognise your place as being a lifelong member of the growing UCC Process Engineering family!

In this context, it's entirely appropriate that we remember two of our family of graduates whom we have known to have passed away in tragic circumstances. Kieran Cullinane, a graduate from the 2000 class passed away on 19th October 2000 after a work incident took his precious life after his career had barely begun. Moreover, we also remember Aidan Murphy who passed away on 19th December 2005, following a tragic fall. We've lost two members of staff over the past 25 years also; Rita Kelleher, our long time and well-loved Senior Executive Assistant passed away around this time of year in 2003, while our Head of Department and instigator of the Process & Chemical Engineering programme, Prof. Fernanda Oliveira died a decade ago in early 2009. You might remember each of these and their families in your prayers and/or with positive thoughts as you find appropriate, remembering their massive and unique contributions to UCC Process Engineering, as well as to their families, friends and society, for no matter how long or short they were with us. Ar dheis Dé go raibh a n-anam go leir.

While we have had some rocky moments over the past quarter century, we can genuinely look forward to the next quarter with a degree of grounded optimism. From a point where there were no staff hires for over a decade and a half after the beginning of the century, and when there was no professor for the most part of a decade, we welcomed a new member of staff in 2017, Dr Elena Tsalaporta, and currently are advertising for a number of new academic positions, including two Eli Lilly lectureship positions in Biochemical/Biopharmaceutical Engineering, as we seek to develop this area across research, teaching and external/industry engagement domains. Indeed, it behoves us to thank Eli Lilly & Company for their support and vision in stepping up to the plate in a very meaningful and material way, and in recognising that the graduate pipeline (especially of process and of chemical engineers) is at least as important, if not more so, than the quality of their drug development pipeline. Lilly's input and engagement has been both long term and positive, and extends across a number of levels (including the Eli Lilly Awards, that a number of you will

have received; see later). They are truly an exemplar organisation for best practice in engaging with their local community and the graduate-societal ecosystem. Indeed, we are always open to developing similar bespoke relationships with other organisations, and we'd like to thank all our industry supporters for input across a wide range of levels, including placement, graduate recruitment, teaching, student design mentorship, awards sponsorship, student society support, support for new equipment and events.

In terms of sponsorship for this evening's twenty first year reunion, we are delighted to team up with Janssen, another star performer in tending to the graduate pipeline. Janssen are our main sponsor for this evening's reunion and their generous sponsorship has helped support the welcoming reception, as well as the associated specially commissioned commemorative items. Janssen are a company who have engaged with us over a number of years and at a number of levels, including in our most valuable and prestigious student prize, the Janssen Scholarship, which is awarded in second year, and is worth a five figure sum over the remainder of their college life to the winning student.

We'd also like to thank PM Group for their sponsorship, which has gone towards supporting this reunion event. PM Group are a local Cork multinational which we can be truly proud of; UCC Process & Chemical Engineering has had a long standing relationship with the company; they've recruited our graduates right from the very beginning of the degree, and excel in giving back through the provision of professional engineering mentorship towards our capstone design project.

We like to say thanks too to all the companies who have supported this event by sponsoring graduates to attend. We are truly lucky to have such great support and relationships across the board from the process industries locally; without you it is quite likely, if not probable that we wouldn't be around at all! These too are not idle words; as recently as two and a half years ago in 2016, the department only had five formal academic staff and a total staff cohort of ten, despite strong student numbers. As a consequence of ongoing neglect for our discipline, and in the context of the deep recession we'd come from with staff hiring restrictions and cutbacks, the upshot was the loss of our MEng IChemE accreditation status following a 2015 IChemE accreditation visit. In the accompanying letter from the IChemE they praised 'the commitment and hard work by the staff and the progress the Department has made to address some of the issues raised at the previous accreditation in 2010'. Nevertheless they also 'noted that there is still no professorial appointment within the Department and there have been no other staffing increases since the last accreditation.' Given that the aforementioned 2010 accreditation had resulted in the continuation of MEng status with the proviso that the professorial post would be filled by 2010/11 as well as another academic post by the end of 2010, there could only be one outcome come 2015 when the IChemE found no progress on these critical issues.

Thus despite strong support for our graduates and (our other) programmes from industry, Process Engineering felt unloved and uncared for, as did our students, who, fearing their future prospects were spurred into action. Two students in particular, Niamh Murray and Andrew O'Regan, stepped up to the plate, and through an online petition addressed to the President of UCC, they rallied fellow students, graduates and friends of the programme. They succeeded to such an extent that they quickly secured over 1,700 signatures, several times the number of graduates and students of the programme. More critically, their petition

was picked up by media outlets and the story of our loss of accreditation due to lack of a professor and an inadequate staff:student ratio found its way onto the front pages of both the Irish Examiner and Evening Echo, as well as into other national publications. This precipitated a rapid turnaround in support for the discipline by the university, and a Chair Professor position was opened and filled in 2016, and lectureship positions were opened in 2016/7, culminating in a situation whereby the programme is now supported by seven academics, up from just five in 2016, and hopefully in 2019 will this number will grow still further.

So while it's been an eventful and at times, bumpy 21 years coming of age on one level, on another level it's been a resounding success. Our graduates, yourselves, have been a credit to the programme and over a relatively short period of time you've developed a reputation for yourselves as a highly intelligent, competent, enthusiastic and valued cohort. Thank you for your work across the process industries, and indeed beyond; we are most proud of you all, as you reflect so well on your programme and discipline!

Before I sign off, I'd like to thank the Maryborough House Hotel for hosting this evening's reunion, to all who've been involved in organising it, and to our musicians for the evening, Benny Fehily and band: Andrea 4.0, who have most generously suggested a donation to Cork Simon in lieu of their appearance fee. If you wish, you might like to support our charity partners for this evening, Cork Simon and Cork D.A.W.G., in order to help them continue the great work they do through 2019 and beyond.

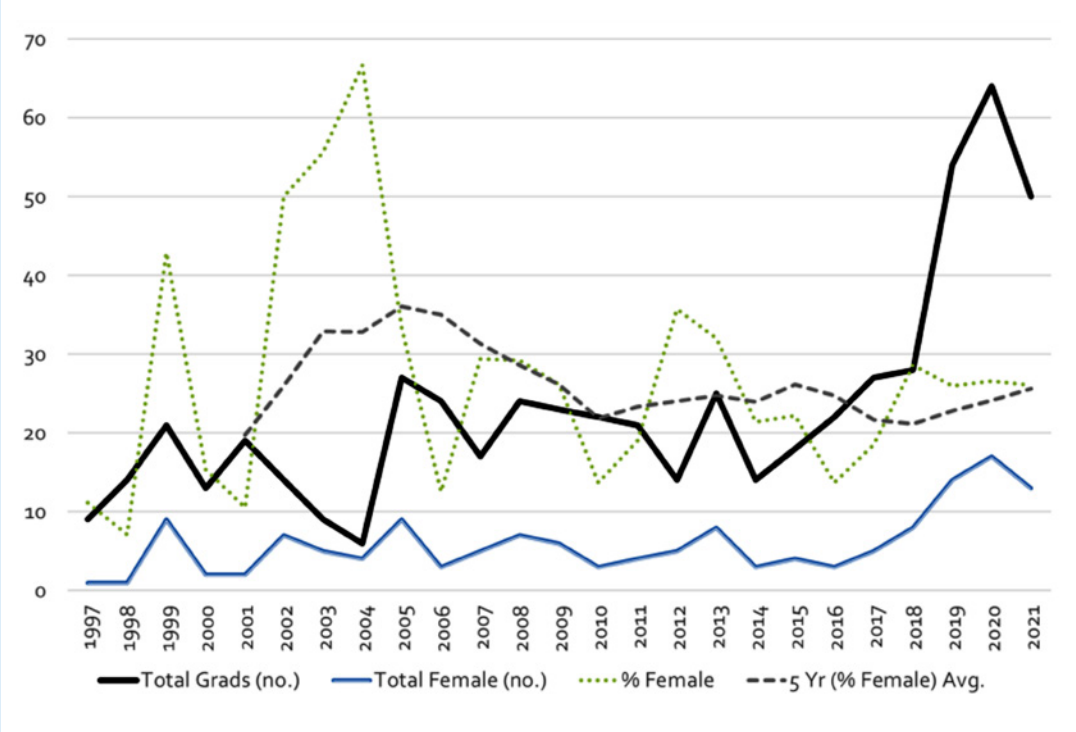
Finally, I'd like to welcome our special guests of honour and their partners at this evening's celebration. These include our current head of School, Prof. Liam Marnane, under whose leadership Process & Chemical Engineering, as with the School in general, has really turned a corner, as he has helped put down solid foundations and supports, which can facilitate future flourishing. We'd also like to offer a special welcome to two lecturers and colleagues who have played vital roles in the establishment and leadership of the programme from its inception up to the end of the last century: Professor Chris Synnott is, one can justifiably claim, the father of the programme, having developed and ably led the programme over its initial years, and whose name lives on among the students through the annual student society organised soccer 'Synnott Cup'. Diarmuid MacCarthy also led the programme during the transition between professors Synnott and Oliveira and, as a chemical engineer, he was instrumental in developing the idea and the foundational basis for transitioning to a chemical engineering programme from the initial food process engineering degree, which while successful in securing jobs, was less attractive to potential students. Diarmuid too was an excellent and inspirational lecturer who cared for his students and their learning through ongoing dedication. It has been people like these, and their colleagues, who have built up the unique family atmosphere of UCC Process & Chemical Engineering; values that we aspire to today, and hope to build on over the next 21 years of graduations and beyond. In conclusion, thank you to all of you who have come here this evening to celebrate the success and achievements, as well as the continuing progress of 'Process' at UCC. It is your success, both individually and collectively, that we are celebrating. Have a lovely evening!

21 years of growing up; UCC Process Engineering comes of age!

by Prof. Edmond Byrne

Graduate numbers on the Process & Chemical Engineering programme have never been higher, with cohorts numbering over fifty to graduate over the coming three years, with a longer term horizon of about twice what the programme has historically catered for. Some 411 graduates have successfully completed the programme over its 21 years from 1997-2018, giving an average of almost twenty graduates per annum. Beneath this figure however, there have been a number of peaks and troughs. The initial start-up of the degree was accompanied by steady growth in the first few years form an initial cohort of nine graduates in 1997 to twenty one in 1999. Numbers began to fall off after that, but the change in department name from Food Engineering to Process Engineering in 2001 (for local political reasons the word 'chemical' was not initially permitted), helped boost numbers again, even if temporarily. Then the full launch of the Process & Chemical Engineering degree (and department name) in 2005 coincided with a rise in graduate numbers to an unprecedented high of 27 that year.

UCC BE Food Process/Process & Chemical Engineering Graduate Numbers (1997-2018 & Projected)



Numbers kept fairly steady until the onset of the global and national financial crash and recession impacted on entry levels from 2008, resulting in 2012 graduate numbers falling to just fourteen. The pharmachem sector, and broader process industries, while impacted in terms of reduced investment over the following years, was not as badly hit as other sectors however, and graduate employment continued to be robust. The message which emanated from this, along with a strengthening of the economy more generally saw strong growth in incoming numbers from 2012. When a common first year and a 'free-for-all' choice was introduced across all engineering programmes from 2015 intake, it led to an immediate spike in numbers and a situation whereby the programme became the most popular of all the UCC engineering offerings, indeed more popular than all the other three programmes put together! While nice to be so popular, a downside of this has been the issue of adequately resourcing and supporting the increased number of students, and by extension issues around staff: student ratios, quality of provision and accreditation (quite apart from issues of student imbalance across the School). In this context, a resource based cap of forty students per annum entering second year Process & Chemical Engineering has been introduced from 2019/20, which should help achieve a consistent and steady-state graduate throughput, at a level which can be sustainable while helping educate graduates of the highest quality to meet and exceed industry and societal requirements and expectations.

UCC BE 'Process Engineering' Graduate Numbers (1997-2018 & Projected)

	Total Graduate Numbers	Total Female Graduate Numbers	Percentage Female
1997	9	1	11
1998	14	1	7
1999	21	9	43
2000	13	2	15
2001	19	2	11
2002	14	7	50
2003	9	5	56
2004	6	4	67
2005	27	9	33
2006	24	3	13
2007	17	5	29
2008	24	7	29
2009	23	6	26
2010	22	3	14
2011	21	4	19
2012	14	5	36
2013	25	8	32
2014	14	3	21
2015	18	4	22
2016	22	3	14
2017	27	5	19
2018	28	8	29
2019 (proj.)	54	14	26
2020 (proj.)	64	17	27
2021 (proj.)	50	13	26

In terms of gender balance, some 104 of the 411 graduates, or 25% of graduates have been female. While the 2019 graduate class will be the first to break double figures in terms of female graduate numbers, two classes (1999 and 2005) have each had nine graduates, representing 43% and 33% of total graduates respectively. The years 2002-2004 had majority female graduate output, though these were based on low graduate numbers in absolute terms. Since then, with generally higher graduate numbers the proportion of female graduates has hovered around 20-30%, with the five year average fairly stable at around 25%. This has been maintained in recent years, even with the surge in graduate numbers, as the average has remained between 25-30%. It seems like that a 'glass ceiling' of 30-33% is stubbornly difficult to break through though, and even going from a 3:1 ratio to a 2:1 has been elusive. Perhaps increased visibility of role models (both in academia and industry) as well as the broader explicit promotion of females in STEM, as evidenced by both government and industry programmes (Janssen's WiSTEM2D project for example), and, as research evidence shows, an explicit emphasis on the very context of professional engineering practice, and how engineers can (and should) be responsible for making a positive societal difference through our work, can help us attract high numbers of top quality school leavers from both genders.

UCC Process & Chemical Engineering Staff Timeline

Department Name	Head of Department	Academic Staff	Non-Academic Staff
Dairy Engineering (1927-?)	**Prof Francis A. McGrath** Lecturer 1926–1946 Professor 1946–1967	**Prof Edward C. Synnott** Lecturer 1962–1969	**Michael O'Mahony** Technical Officer 1927–1974
Dairy & Food Engineering	**Prof Edward C. Synnott** Professor 1969–1998	**Diarmuid A. MacCarthy** Lecturer 1972–2002	**Rita Kelleher** Administrator 1969–2002
Food Engineering (?–2001)	**Diarmuid A. MacCarthy** Acting HoD 1998–1999	**James F. O'Connor** Lecturer 1981–2006	**T.J. (Joe) O'Mahony** Technical Officer 1974–1998
Process Engineering (2001–2005)	**Prof Fernanda A.R. Oliveira** Professor 1999–2007	**Kevin Cronin** Lecturer 1995–	**Anne Woods** Technical Officer 1978–1986
Process & Chemical Engineering (2005–	**Jorge C. Oliveira** Acting HoD 2006–2016	**John J. Fitzpatrick** Lecturer 1995–	**Seamus McGowan** Technical Officer 1978–1980
	Prof Edmond P. Byrne Professor 2016–	**Edmond P. Byrne** Lecturer 1998–2016	**John Barrett** Technical Officer 1980–
		Maria J. de Sousa Gallagher Lecturer 2001–	**Denis Ring** Technical Officer* 1986–2016
		Jorge C. Oliveira Lecturer 2002–	**Tim Twomey** Technical Officer 1995–
		Denis Ring Lecturer* 2016–	**Adrian O'Connor** Technical Officer 1997–2000
		Elena Tsalaporta Lecturer 2017–	**Paul Conway** Technical Officer 2001–
			Anne-Marie McSweeney Administrator 2002–2018

**Denis Ring has lectured on the Process & Chemical Engineering Programme since 2006*

Continuing Professional Development Programmes in Process & Chemical Engineering

Apart from the (level 8) BE degree which we've offered over the past quarter century, UCC Process & Chemical Engineering offers taught professional CPD programmes at both level 7 and level 9. All were set up during the first decade of the century, and include the level 7 Certificate (est. 2002) and Diploma (est. 2004) in Process & Chemical Engineering and the level 9 MEngSc (est. 2007) and PG Diploma (est. 2010) in Pharmaceutical & Biopharmaceutical Engineering. While each of these part time programmes were established and coordinated by Ed Byrne until 2016, they are now ably overseen by Denis Ring (Cert/Dip) and Maria Sousa Gallagher (PG Dip/MEngSc), who offer the following programme overviews:

Certificate/Diploma in Process & Chemical Engineering

The Certificate / Diploma in Process and Chemical Engineering is a Continuing Professional Development course offered to upskill industry personnel. Throughout the process industries (Pharmaceutical, Chemical, Food, Biopharmaceutical, etc.) there are many cases where personnel are in contact with Process and Chemical Engineers and/or whose job develops in such a way that they require a greater understanding of Process and Chemical Engineering principles and applications. The Certificate/Diploma programme provided these people with the opportunity to develop these skills further in earning a formal qualification in the area.

The programme began in 2002 and 279 students have successfully completed either programme in the 16 year period since its inception. Entry to the course is broad with students having qualifications ranging from PhD's to Leaving Certificates. The course provides students with an understanding of the basic principles which underpin Process and Chemical Engineering and how they are applied in the process industries. The Certificate/Diploma programme covers the fundamentals of process engineering, heat, mass and momentum transfer and their application to a number of unit operations and process technologies. Students will also be exposed to other elements of Process Engineering, such as environmental engineering, reactor design, engineering chemistry, plant design, safety and project management, and are required to complete a design project which will incorporate elements from each of these modules.

For more information, please contact Programme Director, **Dr Denis Ring** (d.ring@ucc.ie / 021 490 2549) or see the programme website: www.ucc.ie/processeng/postgrads/cpd/

MEngSc/PG Diploma in Pharmaceutical & Biopharmaceutical Engineering

The Biopharma industry is one of the fastest growing sectors in Ireland according to the Expert Group on Future Skills Needs (EGFSN) of the Biopharma Industry in Ireland (EGFSN report, 2016).

The MEngSc in Pharmaceutical & Biopharmaceutical Engineering is a part-time blended learning taught programme that leads to the award of an NQAI level 9 PG Diploma or MEngSc degree. It can be taken over 24 months, or up to a maximum of 60 months. Part I of the MEngSc consists of 60 ECTS credits or 12 modules on Pharmaceutical & Biopharmaceutical Engineering. Part II is a 30 credit minor thesis module.

The aim of this level 9 programme is to fill a need for the Continuing Professional Development and postgraduate education of engineers working in the pharmaceutical & biopharmaceutical Industry. Many engineering graduates (including chemical & process engineering graduates) do not have formal educational qualifications relating specifically to the bio/pharmaceutical industry. This is because many undergraduate chemical engineering courses, which are generally broad in nature, do not cover issues of particular concern to the bio/pharmaceutical industry (e.g., pharmaceutical and biopharmaceutical production processes, product containment, powder/particle technology, design of API and secondary production facilities, current Good Manufacturing Practice (cGMP), design of classified facilities, aseptic processing, validation, etc.). This is the case to an even greater extent for graduates of other engineering disciplines.

The minor research thesis/dissertation module (PE6021) has generally been developed in the pharmaceutical & biopharmaceutical industry in Ireland. Students have up to 60 months from the registration date to complete the thesis. Research theses are industry-based and an example of student centred approach to develop competencies by applying teaching & learning through innovative approaches to solve real problems of interest to the pharmaceutical & biopharmaceutical industry.

Graduate employability is excellent, and the MEngSc has helped graduates to progress in their careers and often they change across to other jobs in the pharmaceutical and biopharmaceutical industries. Around 50 students have graduated since the first cohort in 2010. The structure of the programme suits those who are working in local industry, and it is recommended to graduate engineers of companies like PM Group.

For more information, please contact Programme Director, **Dr Maria Sousa Gallagher** (m.desousagallagher@ucc.ie / 021 490 3594) or see the programme website: www.ucc.ie/processeng/postgrads/taughtmasters/mengsc

Undergraduate Awards

Undergraduate Awards

There are a number of student awards in Process & Chemical Engineering, supported by a range of industry partners, comprising medals, bursaries and scholarships. The awards are presented annually at an awards night in the Aula Max. We'd like to sincerely thank each of the organisations who support these awards (Eli Lilly, Janssen, PM Group and AbbVie) for their continued support and engagement. Details and pictures for the respective awards are provided below.

Eli Lilly Awards

Eli Lilly have sponsored the 'Eli Lilly Awards for Excellence in Process & Chemical Engineering' at UCC since 2006-7. This award is made annually to students from each of the four years in Process & Chemical Engineering at UCC on the basis of academic excellence (70%) and contribution to department/discipline (30%). Given that the awards are made to a different student each year, students may have up to four chances to enter the 'Lilly Hall of Fame'. A shortlist is drawn up by peers from respective years, from which staff select the winners. The award is a specially minted commemorative medal and a cash prize.

Graduating Year	Name	Year of study Award Presented
2021	Daniel Maguire Adina Zagoneanu	2 1
2020	Alannah Hill Aisling Broderick Colm Power	3 2 1
2019	Colin McCarthy Eimear Duggan* Killian Doyle* Odhran O'Callaghan Vivienne Barry Gary O'Leary	4 4 4 3 2 1
2018	Michael O'Lionáird Ruth Murphy Kevin Holland	4 3 2
2017	Sean O'Sullivan Rowen LaMere Oisin Collins Jean O'Driscoll Peter Kelleher*	4 3 2 1
2016	Robert O'Connell Jack Murphy Fergal Lalor David O'Sullivan	4 3 2 1
2015	Aibhin O'Brien Anna Cremin Michelle Leahy Brian Twomey	4 3 2 1

Graduating Year	Name	Year of study Award Presented
2014	Ciaran O'Sullivan Ailbhe Connolly* Donal Scanlan John Leonard Geoffrey Lodge	4 4 3 2 1
2013	Darren Griffin Sean Daly Emily Woods Alan Crowley	4 3 2 1
2012	Kate O'Sullivan Hugh Boylan* Aisling Burke Jahzeil Pasco Stephen Murphy	4 4 3 2 1
2011	Eoin Kiely Laura Sheehan Philip Donnellan Fionnuala Hayes	4 3 2 1
2010	Brian Schafer Kevin Gibson* Mary O'Mahony Aaron Collins Peter Clune	4 4 3 2 1
2009	Aisling O'Leary Sean Peyton Grace O'Mahony	4 3 2
2008	Karen Brick Stephen Nation* Kevin Hanley	4 4 3
2007	Conor O'Brien	4

**Outstanding Contribution awarded only in special circumstances*

PM Group Design Award

This award is presented to a graduating student for the best individual design memo, as part of the final year design project. The award is a specially minted commemorative medal and a significant cash prize.

Graduating Year	Name
2018	Kevin Holland
2017	Jean O'Driscoll
2016	Fergal Lawlor

AbbVie Award

This award is presented to a graduating student with the best aggregate marks in two third year modules and two final year modules, as selected by AbbVie (PE3009 Pharmaceutical Engineering; PE3013 Process Validation and Quality; PE4002 Optimisation and Continuous Process Improvement; PE4006 Design Project). It involves a commemorative medal and a cash prize.

Graduating Year	Name
2018	Kevin Holland
2017	Shane McDonald
2016	Daniel Healy

Janssen Scholarship

The Janssen Scholarship is our most valuable award and is presented annually to a second year student. Candidates are shortlisted and then are interviewed by staff from Process & Chemical Engineering and Janssen. Scoring for the scholarship incorporates Leaving Certificate scores (20 marks), first year UCC results (20 marks) and 60 marks for the interview (comprising enthusiasm (15 marks), leadership Potential (15 marks), innovation (15 marks), interpersonal skills (15 marks).

The award includes a €2,500 prize per annum for the rest of the student's programme and the opportunity for placement.

Graduating Year	Name
2021	Daniel Maguire
2020	David Murphy
2019	Alysha Walsh
2018	Molly Henchion

Staff reflections from throughout the years

Historical Context and some Personal Reflections

By Prof. E.C. Synnott (1962-1998)

On the occasion of celebrating twenty-one graduated classes in Food/Process & Chemical Engineering, it is my privilege to recall some of the historic links between this Department and its former staff in other, some perhaps long forgotten, Engineering Degrees in U.C.C..

Frank McGrath graduated from U.C.C. with a B.E. (Mech and Elec) in 1919. This three-year Degree, almost forgotten today in U.C.C., was established by the N.U.I. in 1914 in an alliance between U.C.C. and the then Sharman Crawford Technical Institute, Cork (now incorporated in C.I.T. and with that building its current College of Art and Design). The first year was taken in U.C.C. with the second and third years based in the Technical Institute, which had excellent labs and workshops in these two areas. The Principal of the Institute, John H. Grindley, D.Sc., MIMechE, was very acceptable as a University Teacher.

In 1920, Dr. Grindley resigned and his appointed successor was not a University graduate, and therefore not acceptable as a University Teacher. To keep the course alive, four of the course graduates, now employed by Henry Ford and Sons, agreed to take over the course lecture load in the Institute and this was accomodated by Fords. By the end of the 1921 session, three of these graduates had moved on and Frank McGrath took over the complete course in Mechanical and Electrical Engineering in October 1922. He therefore had to resign from Fords.

The Dairy Science Faculty was established in U.C.C. in 1926 with six Departments, five of which were headed by Lecturers and one by the existing Professor of Agriculture as head and permanent Dean of the Faculty. This was unlike all other Faculties in U.C.C., each of which had an elected Dean with a limited term in office. This set-up led to very serious friction in later years and required the presence of two Judges (one from the Supreme Court and one from the High Court) as official University Visitors, to resolve the matter. All extant Lecturers/Department Heads were, in due course, upgraded to Professor in the 1940s.

Francis A. McGrath was the first Lecturer and Professor of Dairy Engineering, until his lamented death-in-office in 1967. He also held a Lectureship in Electrical Engineering before 1926 and continued to lecture in that subject to second Civil students and in Applied Heat to their final year classes. He played a very significant role in the establishment of the new Department of Electrical Engineering and in the building of its new facilities at its present location in U.C.C. This four-year course commenced at third-year level in 1954, with the first class graduating in 1956.

In the late 1950s, with the remainder of the original cohort of staff in the Dairy Science Faculty approaching retirement, American funds became available to train new potential extra staff. Each department nominated suitable

graduates. Generally, this enabled them to carry out Ph.D. research in American Universities. Professor McGrath selected me to avail of one of those scholarships.

I had graduated with a B.E.(Civil) in 1954 and I stayed on to be one of the first B.E.(Elec.) graduates in 1956. Like Professor McGrath in earlier times, I worked in the Electrical Engineering Department until permanent staff were being appointed in 1959. During that year, I had accepted U.C.C.'s offer of a two-year grant for a mixture of four months teaching in the Department during the busier first and second terms and eight months of structured practical experience in Europe. My first placement was as a design and development engineer with the APV Company in England. In the following year, in Denmark and Sweden, I had very wide experience with a number of other manufacturing firms of dairy processing equipment and engineering services and spent time in two dairy processing plants.

My M.Eng.Sc. was finally finished and I was appointed to a new Statutory Lectureship in the Department in 1962. I completed my Ph.D. in 1969 and was appointed Professor of Dairy and Food Engineering later that year. The title of the Chair was some years later changed to Food Engineering.

The first plans for a large new Dairy Science extension were in existance when I joined the Department in 1959. Following twenty years of frustration in designing building layouts for about four different sites, we eventually moved into the present buildings in 1978.

Plans for a bioengineering/technology degree were agreed by the N.U.I. Senate but were never funded. The Food Science Faculty then decided to scrap the general B.Sc. in Food Science and the Diplomas in Dairy Science and Meat Science in favour of five new degree streams. One of these streams was the B.E.(Food Engineering). The existing three academic staff in the department[1] developed the new course layout and, with the help of two new lecturers[2], delivered the first graduate class in 1997.

I retired in 1998 and was replaced by a dynamic new professor in Fernanda Oliveira, whose tenure was highly productive in widening the scope of the degree and cut tragically short at an early age. The Department has always had the benefit of very good staff at all levels. The present cohort is no exception and I wish every success in the years ahead to the new professor, Edmond Byrne, the Department itself and its future graduates.

[1]Prof. E.C Synnott, Mr. D.A. MacCarthy, Dr. J.F. O'Connor (now President, CIT)

[2]Dr. J.J. Fitzpatrick, Dr K. Cronin



The Process Engineering Family

By Anne-Marie McSweeney (2002-2018)

When I joined Process Engineering on 4th June 2002, I immediately felt part of a warm, cohesive group that was nurturing and supportive of all students and staff. Through enormous changes in the fabric of the university on a micro level, and the entire public service, and through tough times and struggles with resources, this it has done and continues to do in an amazing way, and always with a smile and the welfare of the students at heart. It is the ethos and core value that makes Process different.

There are very different personalities in the team (which makes for a very entertaining coffee break!!), but each and every person is committed, driven and determined to look after the students as the number one priority.

Every student who walks in the door of Process will be supported and nurtured to reach their full potential as a world-class engineer, capable of making the world a better place, and the team look proudly on as the graduate engineers take flight each year and soar to new heights in their lives and careers. It really is like family.

I am immensely proud to have been part of such an amazing team of people for over 16 years, and grateful too, to have been supported when I chose to spread my wings recently and find a new position back in industry. I will always feel part of the strong and united family that is Process Engineering, and will always fly the flag for our graduates and their achievements.

It is fantastic to see you all soar and make wonderful lives for yourselves, knowing that we had some small part in helping you on your way. We will always be family.

A xx

Programme

7.00pm – 7.30pm	**Prosecco Reception in the Garden Room**
8.00pm	**Dinner in the Sherrard Suite**

The evening will be interspersed by some reflections from graduates from across the years.

Music: **Benny Fehily and band: Andrea 4.0**

Note: The band have generously proposed a donation to the Cork Simon Community in lieu of their appearance fee. A donation is thus being made available to our charity partners for tonight's Reunion: Cork Simon Community and Cork D.A.W.G.

Menu

Starter

Lightly Spiced Free Range Chicken Salad,
Mango and Charred Lime Salsa,
Curried Macadamia Nut, Seasonal Leaves,
Passionfruit Dressing

Main

Roast Sirloin of Irish Beef
Confit Garlic Mash, Red Onion Marmalade,
Thyme and Sherry Jus

or

Fillets of Seabass
Samphire, Petit Pois, Fennel and Caraway Cream

Dessert

Winter Symphony of Desserts
Pistachio & Raspberry Frangipane Tartlet,
Cinnamon & Red Wine Poached Pear with Mascarpone
& Nut Filling, Classic Tiramisu

Tea / Coffee

Sponsors

We would like to sincerely thank our sponsors, including main sponsor Janssen, as well as PM Group, who have contributed towards your evening, including the welcoming reception and some specially commissioned commemorative guest items, which we hope you'll enjoy! Both Janssen and PM Group have been first rate supporters and friends of UCC Process & Chemical Engineering over the past two decades since our inception, not just in hiring our graduates, but at a number of levels including in providing teaching, student mentorship, work placement opportunities, and of course student awards and scholarships, including our most prestigious award, the Janssen Scholarship and the PM Group design award (see elsewhere and below). As valued partners, we'd like to thank both Janssen and PM Group for your support this evening, and wish you the very best, in Cork and beyond, over the quarter century ahead. The following are some words from our valued sponsors.



Janssen and UCC Process and Chemical Engineering Partnership

Janssen Sciences UC is part of the Johnson & Johnson family of companies, the world's most comprehensive and broadly based manufacturer of healthcare products and related services.

Johnson & Johnson employs more than 2,700 highly skilled and motivated people in Ireland. These employees support the company's pharmaceutical, medical device and consumer business through engineering, manufacturing plants, four commercial offices and an IT centre of excellence.

The Janssen Sciences UC facility in Cork was established in 2005 and there are 555 people working at the facility in Ringaskiddy. In 2016 the company became the first pharmaceutical manufacturing company in Ireland to receive the Business Working Responsibly Mark for its commitment and activity towards creating responsible and sustainable business practices.

Johnson & Johnson is committed to developing and implementing high impact strategies to support students pursuing careers in the process and chemical engineering areas. As part of this effort, Janssen has created strong links with UCC, including scholarships. Scholarships can be an important first step to future employment for young people and Janssen Sciences Ireland UC has recognised this pathway and established the Scholarship programme with UCC.

The Janssen Engineering scholarship is awarded to a second-year student each year. The winner of the scholarship can complete their internship in Janssen during their third year in college. The scholarship program connects Janssen with the student population and a number of the finalists (not just the winners) have worked with Janssen to complete both their final year project and their Masters Degrees.

Since the programme was incepted in 2015, Janssen has been extremely impressed with the calibre of students that have both applied for and received scholarships. Not only have the students benefited from being sponsored by Janssen, the company has also benefited from access to the next generation of process and chemical engineers in UCC. Through the scholarship programme, the very best talent in UCC has been exposed to opportunities within Janssen that will benefit them in their future careers. It also raises the profile of the course and offers a further incentive for students to enrol in it.

We look forward to working with the UCC Process and Chemical Engineering Department for many more years to come.

PM Group, the project delivery specialists

PM Group is an international project delivery company operating in Europe, the USA and Asia. We manage the design, construction and commissioning of high tech facilities. Over 45 years we've built our expertise working for the world's leading Pharma, Food, Data Centre and Medtech companies.

They come to us for our expertise in project management, process design, facility design and construction management. With a team of over 2,500 people, we are currently working on projects in over 30 countries worldwide.

We are a 100% employee owned company. Our reputation is built on great people who deliver real results for our clients. Their expertise, commitment and innovation are at the heart of our success. We hire talented people who are passionate about project delivery.

Visit our website to discover more:
www.pmgroup-global.com

PM Group is delighted to support Process and Chemical Engineering in UCC. We value the important contribution made to our organisation, and to many others both nationally and internationally, by the graduates of the BE (Hons) Food Process Engineering and Process & Chemical Engineering from 1997 to 2018. Congratulations to all involved in achieving this great milestone. We wish you all the best for many more.

Reflections on 25 years of Process Engineering in UCC

By Dr Jorge C. Oliveira (Head of Department, 2006-2016)

Why did UCC develop a process & chemical engineering (previously food process engineering) BE?

The biggest word in the term “public service” should be the 2nd. Our focus has been the population that we serve. What does our community need that we can and should deliver?

Answering this question, Prof. Ed Synnot responded to the need of the food industry for a specialised engineering profile, which led to the creation of the food process engineering degree in 1993, the first graduates in 1997. They soon started being pinched by the growing pharma sector and so the next Prof., Fernanda Oliveira, grew the programme towards a generic chemical and process engineering profile in 2001, the first graduates in 2005. These pioneers of process engineering at UCC established an environment with a student and industry focus that has been our driving force even since.

With the untimely passing of Prof. Fernanda Oliveira coinciding with the economic crisis of the century we had to make our crossing of the desert while protecting the quality and commitment of the work we do towards our community, which I was only able to lead during those times because of the professionalism of all the staff of UCC chemical engineering without exception, who never lost sight of the importance of a modern and effective education in chemical engineering, come what may, through the lean years.

It is with great belief in the future that Prof. Ed Byrne is now leading our new phase of development. The challenges that we face as a community have not abated nor simplified the role of the chemical/process engineer in providing solutions for sustainable growth. That belief comes from the experience of providing higher education to such receptive and engaging cohorts of students that we have had over the years.

Chemical engineering in UCC has only been successful because we’ve had such great people coming through. It is thus only appropriate that we celebrate all our alumni and the community that we all have become, foreseeing how much we will continue to contribute to make Ireland, and Munster in particular, an enviable spot in this world.

BE Food Process Engineering (1997-2004), Process & Chemical Engineering (2005-2018) Graduates



BE Food Process Engineering 1997

Back row: Donal Dowling, Brian MacCarthy, Séan Murphy, Martin O'Sullivan, James Aherne, Patricia Kelleher, Brian Collins, Séan McGrath, Ben Harte, Rita Kelleher, Colm Murnane

Front row: Dr Kevin Cronin, Diarmuid MacCarthy, Prof E.C. Synnott, Dr Barry O'Connor



BE Food Process Engineering 1998

Back row: Mital Shah, Joseph O'Gorman, James Galvin, John Lane, Dermot Dineen, Kevin Kilbride, Michael Verling, Kevin Kerstein

Front row: Michael Roche, Brian O'Conell, Cora Keohane, Crona MacCarthy, Maria Curran, Mark Lee



BE Food Process Engineering 1999

Back row: Paul Finn, Nuala Ryan, Damian Collins, Rita Kelleher, Diarmuid MacCarthy, Prof Peter Fryer (Extern, U Birmingham)

Second row: Jerry McHugh, Aonghus Barry, Colin Lucey, Gavan O'Halloran, Breda O'Brien, Frances Browne, Davis Whittle, Dr Barry O'Connor

Third row: Leonard Twomey, Kieran Russell, Kate Lehane, Emma Greene, Elizabeth O'Sullivan, Des Lehane

Front row: Finbarr Quirke, David Deasy, Séan O'Connell, Camilla Hegarty, Jacqueline MacCarthy, Jerry Quirke



BE Food Process Engineering 2000

Niall Harte, Séamus Buckley, Cormac Murphy, Anthony Hayed, Catherine Horgan, Adrian Healy, Tom Brazil, Ryan Murphy, Julie O'Mahony, Colette Ryan



BE Food Process Engineering 2001

Back row: Vaughan Morrison, Brian Haig, Dr Ed Byrne, Gerard Purtill, Michael O'Neill, Tadgh Horgan, T.J. Greaney

Middle row: Michael Murphy, Brendan Barry, John Barrett, Dr Kevin Cronin, Dr Barry O'Connor, Glen Keane, Jerry O'Mahony

Front row: Rita Kelleher, Diarmuid MacCarthy, Denis Ring, Jenny Crowley, Prof Fernanda Oliveira, Frances Dowling, Tim Twomey, John Barrett, Dr John Fitzpatrick



BE Food Process Engineering 2002

Back row: Denis Ring, Mario Barrett, Dr Ed Byrne, Michael Hurley, Peter Marron, Michael O'Donovan, John Barrett, Paula Coffey

Middle row: Dr Kevin Cronin, Diarmuid MacCarthy, Dr Maria deSousa Gallagher, TimTwomey, Donal O'Keeffe, Keara O'Leary, Lisa Heffernan, Siobhán Cunningham, Paul Conway

Front row: Anne-Marie McSweeney, Prof Mark Hendrickx (Extern, KU Leuven), Prof Fernanda Oliveira, Kevin Barry, Mary Frances Raleigh, Dr John Fitzpatrick, Hilary O'Neill, Sinéad Heffernan



BE Food Process Engineering 2003

Back row: Paul Conway, Dr Jorge Oliveira, Dr Ed Byrne, Denis Ring, Prof E.C. Synnott, Dr Gregory Cartland-Glover

Middle row: Dr Barry O'Connor, Orna O'Beirne, Dr Maria de Sousa Gallagher, Sarah Maloney, Niall O'Sullivan, Anne-Marie McSweeney, Máire Brosnan, Diarmuid McCarthy, Dr Pramod Mahajan

Front row: Prof Ronnie Magee (Extern, QUB), Prof Fernanda Oliveira, Dr John Fitzpatrick, Robert Cuthbert, Michelle Murphy, Jamie Barrett, Abby Lehane, Tim Twomey, Dr Kevin Cronin



BE Food Process Engineering 2004

Back row: Denis Ring, Paul Conway, Tim Twomey, Dr John Fitzpatrick, Dr Kevin Cronin, John McSweeney

Middle row: Dr Ed Byrne, Dr Maria deSousa Gallagher, Maura Walsh, Aidan Murphy, Prof Ronnie Magee (extern, QUB)

Front row: Dr Tumuluru Jaya Shankar, John Cashman, Aoife Lynch, King Ip Yau, Julie O'Neill, Dr Barry O'Connor, Sarah Barnes



BE Process & Chemical Engineering 2005

Back row: Tim Twomey, Denis Ring, Séan Twomey, Jason Creagh, Kevin Bolger, Michael Dermody, Thomas O'Dwyer, Shane Baker, Kieran Tobin, Dr Ed Byrne, John Barrett

Middle row: Paul Conway, Dr Kevin Cronin, John Harnett, David Brennan, Jane Beecher, Brian Russell, Rita Ahern, Brian McMahon, Barry Curtin, Andrew O'Leary, Mark Hodnett, Niall Ferguson, Patrick Dunphy, John O'Donnell

Front row: Dr Maria de Sousa Gallagher, Alana Murphy, Simon Carroll, Christine O'Sullivan, Bernadette O'Connor, Orla Cronin, Catherine Begley, Louise Foley, Maria Twomey



BE Process & Chemical Engineering 2006

Denis Murphy, John O'Flynn, Darragh Cunningham, Colin McKeown, Líam Horgan, Peter Brophy, Cillian Buckley, Ronan Dineen, Paul O'Donovan, Shane O'Sullivan, Niall O'Gorman, Padraig Mulcahy, Eoin O'Keeffe, Cían McLeavey-Reville, Colum Twomey, Kathryn Vaughan, Christopher Ryan, Justin Molina, Catherine Everett, Owen Bourke



BE Process & Chemical Engineering 2007

Back row: Julie Holland, Robin O'Shea, Dr Ed Byrne, Michael Murphy, Séan Murphy, Shane Healy, Anne-Marie McSweeney, John Barrett

Middle row: Dr Jorge Oliveira, James McMahon, James Ryan, David Foley, Conor O'Brien, David Morrissy, Denis Ring

Front row: Prof Fernanda Oliveira, Peter Dann, Mairéad O'Leary, Aisling O'Connor, Mary Lafferty, Emer McMarthy, Eilís O'Callaghan, Aidan Culhane, Dr Maria deSousa Gallagher



BE Process & Chemical Engineering 2008

Back row: Julie Holland, David O'Meara, Tim Twomey, Aindrias Corcoran, Cormac Quaid, Conor Jones, Stephen Nation, Donncha Walsh, James McSweeney, Bryan Crowley, Anne-Marie McSweeney

Middle row: Kevin Hanley, Jennifer Boland, Vincent Irwin, Michelle Cronin, Shane O'Neill, Fintan Goold, Denis Ring, Dr Jorge Oliveira, Shane Baker

Front row: Dr Maria deSousa Gallagher, Stephen Hodnett, Rebecca Wolfe, Paul Barrett, Andrew Sammon, Karen Brick, Niamh Casey, Killian O'Meara, Elaine Higgins, Ciara Keohane, Dr Pramod Mahajan



BE Process & Chemical Engineering 2009

Back row: Aoibheann Hurley, Eoin Hayes, Denis Ring, Eamon Murphy, Dr Ed Byrne, Aisling O'Leary, James O'Mahony, Tim Keady, Hugh Kane, Philip Colgan, Colyn Murphy, Tim Twomey, Julie Holland

Middle row: Dr Pramod Mahajan, John Barrett, Michael Spitere, Thomas O'Connell, Wayne O'Grady, Richard O'Brien, Rachel Morley, Brian Scanlon, Dr Maria deSousa Gallagher, Anne-Marie McSweeney

Front row: Dr John Fitzpatrick, Marian Crowley, David Hennessy, Gina Lynch, Grace O'Mahony, Séan Peyton, Daniel Mullamphy, Dr Jorge Oliveira, Paul Conway



BE Process & Chemical Engineering 2010

Colm Crowley, Brian Schafer, Jonathan O'Sullivan, Tim McMahon, Cornelius O'Donnell, Niall McNamara, Donal Costello, Eoin Keegan, Ciara Moriarty, Daragh Mansfield, Orla Cribbin, Aaron Collins, Mary O'Mahony, Patrick Fitzgerald, Niall O'Carroll, Cian Kearney, John Hannon, Lorcan Cosgrave



BE Process & Chemical Engineering 2011

Back row: Janet Deasy, Laura Sheehan, Andrew Doyle, Theo Cullinane, Conor O'Sullivan, Séamus Scanlon, Philip Donnellan, Mark Hayden, Kevin Gibson, Con Breen

Second row: Niall Courtney, Michael Cronin, Dylan Burke, Fionnuala Hayes, Dr Ed Byrne, Dr Jorge Oliveira, Caroline Murnane, Daniel Cooke, Donncha O'Donovan, Shaun Shanahan, Eoin Kiely, Robert Kennedy



BE Process & Chemical Engineering 2012

Clodagh Kelleher, Kate O'Sullivan, Jahziel Pasco, Aisling Burke, Ben Martin, Thomas O'Sullivan, Hugh Boylan, Eoin Keane, Brian Boland, Ronan O'Brien, Stephen Murphy, Denis O'Brien, Seán Curtin



BE Process & Chemical Engineering 2013

Back row: Conor McCarthy, Rory McSweeney, Stephen O'Brien, Ciarán O'Shea, Sinead McCarthy, Mairead Rice, Brian Dineen, Seán Daly, Emily Woods

Second row: Aisling O'Riordan, Sarah Murphy, Emma Deignan, Laura Tobin, Mark Menton, Ciarán McBride, Alan Crowley, Michael Lucey, Conail Murphy, Darren Griffin, Karen Cotter, Michael Long, Eoghan Harnedy, Eamonn Butler



BE Process & Chemical Engineering 2014

Back row: Katherine Condon, Craig O'Connor, Andrias O'Muimhneacháin, John O'Sullivan, Ailbhe Connolly, Ciarán O'Shea, Stephen Fahy

Second row: Peter Birmingham, Fiona O'Brien, [UCC Staff], John Leonard, Geoffrey Lodge, Shane McCarthy, Donal Scanlan



BE Process & Chemical Engineering 2015

Back row: Paul Murphy, Daniel Keating, Timothy Cummins, Ross McNulty, Denis O'Riordan, James Connolly, Eamonn O' Regan, Dr Ed. Byrne

Second row: Dr John Fitzpatrick, Christopher O'Brien, Jeremy Moloney, Conor Barry, Darren Mythen, Brian Twomey, Tom Collins, Dr Kevin Cronin

Front Row: John Barrett, Valerie McCarthy, Aibhin O'Brien, Anna Cremin, Rachel Jennings, Michelle Leahy, Tim Twomey



BE Process & Chemical Engineering 2016

Back row: Dr Ed Byrne, Dr Kevin Cronin, Tim Twomey, Eoghan Kelleher, David O'Sullivan, Conor O'Donovan, John Murphy, Brian Mullally

Second Row: Henry Donnelly, Daniel Healy, James O'Connor, Calvin O'Callaghan, Eoin Keller

Third row: Dr Denis Ring, Sam Harrington, Killian O'Brien, Adam McGee, Robert O'Connell, Cian Spriggs

Front Row: Andrew O'Regan, Gearóid Finn, Seán Looney, Fergal Lalor, Grace Kevany, Emma O'Brien, Niamh Murray



BE Process & Chemical Engineering 2017

Davoren Murphy, Kevin Creagh, Peter Kelleher, James O'Herlihy, Séan O'Sullivan, Brendan Collins, Killian Davin, Brian McAuliffe, Shane McDonald, Fionn McLane, Jerry Roche

Alan O'Donovan, Conor Daly, Aaron O'Donovan, Rowan LaMere, Cormac O'Connell, Sean Kerrigan, Sean Lovett, Oisín Collins

James O'Flynn, Nessa Murphy, Eimear Twomey, Jean O'Driscoll, Fiona O'Keefe, Edel Lenihan, Brigid Walsh



BE Process & Chemical Engineering 2018

Back Row: Cormac Fleming, Luke Garvin, Shane Peeren, Meadhbh Campbell, Ms Anne Marie McSweeney, Mr Paul Conway, Killian Egan, Mr Tim Twomey, Billy McConville, Prof Ed Byrne, Dr Kevin Cronin, Peter Stokes, Mícheál Ó Lionáird, Dr John Fitzpatrick, Cormac Dineen, Shane Lordan, Eoin Long, Cian O'Regan, Dr Denis Ring, Luke Kelly, Kevin Holland, Chris Dowling, Dr Elena Tsalaporta, Eoin Doyle, Dr Andresa Ramos, Dr Maria de Sousa Gallagher

Front Row: Ruth Murphy, Eimear O'Shea, Ailbhe McKiernan, Ellen O'Driscoll, Kayleigh Tobin, Catherine Harty, Carla Reinhardt, Molly Henchion, James Greene, Tiernan Guinée, Jack Divane, TJ Murphy



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