ChE | Issue 5 | September 2026

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ETHIOPIAN SOCIETY OF CHEMICAL ENGINEERS

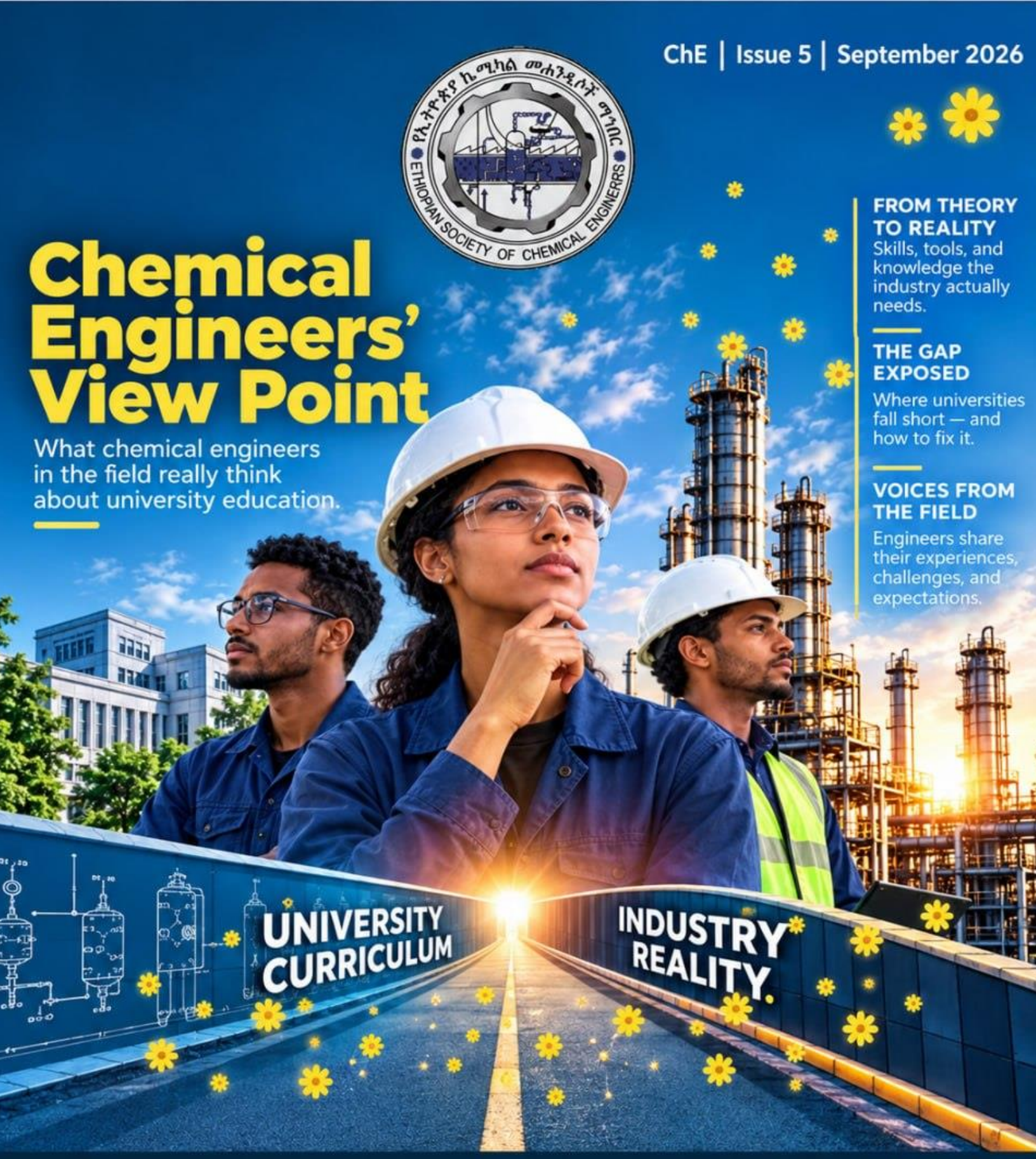
Chemical Engineers' View Point

What chemical engineers in the field really think about university education.

FROM THEORY TO REALITY
Skills, tools, and knowledge the industry actually needs.

THE GAP EXPOSED
Where universities fall short — and how to fix it.

VOICES FROM THE FIELD
Engineers share their experiences, challenges, and expectations.



REAL SKILLS for real problems.

PRACTICAL LEARNING not just theory.

INDUSTRY COLLABORATION for a stronger future.

DIFFERENT PERSPECTIVES. ONE GOAL.
A STRONGER CHEMICAL ENGINEERING COMMUNITY.

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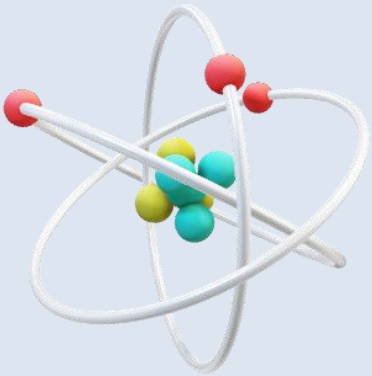
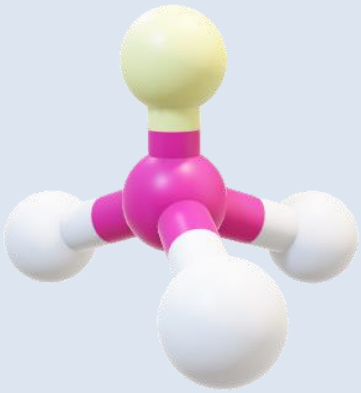




- Elias Tadesse, Editor

Columnists:

- Kidus Mulugeta
- Redeat Habtamu
- Yohannes Berhanu

President's Message

Dear Members of the Ethiopian Society of Chemical Engineers,

As we welcome the month of September, we embrace a season of renewal and new beginnings. For Ethiopians, September marks the beginning of a New Year, while for our academic community, it also signals the start of a new academic year. It is therefore an appropriate time to reflect on growth, renewal, and the future. In this spirit, the September edition of our newsletter focuses on a topic of fundamental importance to our profession and national development: **Chemical Engineering Education in Ethiopia**. The quality and relevance of our education form the foundation upon which our profession, industries, innovation, and broader development ambitions are built.

Over the years, Ethiopian chemical engineering programmes have produced many competent graduates who have made valuable contributions in industry, academia, government, and other sectors. The strong theoretical foundations and core technical knowledge provided by our programmes remain important strengths. At the same time, the rapidly changing needs of industry and the emergence of new technologies require us to continuously reflect on how chemical engineering education can remain relevant, practical, and forward-looking. Strengthening the connection between academic training and industrial practice is particularly important. Greater exposure to practical process simulation, industrial safety, modern engineering tools, emerging technologies such as artificial intelligence and digital twins, as well as sustainability and circular economy principles, can help prepare graduates for the evolving realities of the profession. Continuous curriculum review, with meaningful engagement from industry, universities, professional bodies, and other stakeholders, will be essential in ensuring that our programmes respond to both national needs and global developments.

As students return to universities across the country, I would like to warmly welcome our chemical engineering students to the new academic year. To our 2nd, 3rd, and 4th year undergraduate as well as graduate students, this is another opportunity to learn, grow, build professional relationships, and prepare yourselves for the responsibilities that await you beyond the university. Those who had the opportunity to gain practical experience through internships and industrial attachments during the break have taken an important step in connecting classroom knowledge with real-world practice. Such experiences are invaluable and should be encouraged. For all students, I encourage you to approach the new academic year with curiosity, discipline, and a willingness to develop both your technical knowledge and professional skills.

I am also pleased to share that the ESChE Executive Committee has finalized the Student Chapter Framework, which outlines the structure, benefits, responsibilities, and minimum requirements for establishing and sustaining active student chapters. During this academic year, the framework will be implemented initially as a pilot programme in three universities. We also invite universities interested in establishing or revitalizing their student chapters to communicate their interest to the ESChE Secretariat. This represents an important step toward our broader vision of creating vibrant student communities that provide opportunities for learning, networking, professional development, and leadership.

Another encouraging development is the continued progress of the Journal of the Ethiopian Society of Chemical Engineers, which is now active on the Society's website with its Editorial Board in place. We look forward to strengthening the journal as a platform for research, innovation, and knowledge exchange and to increasing the visibility of Ethiopian chemical engineering research. I encourage our members, researchers, academics, and professionals to contribute to and support this important initiative.

Building on the momentum of our student chapter activities, the Executive Committee will also continue working toward the establishment of regional and diaspora chapters. These initiatives will help extend the reach of ESChE, connect professionals across different regions of Ethiopia and around the world, and create stronger opportunities for collaboration and engagement among our members.

As we enter both a new Ethiopian year and a new academic year, let us embrace this period as an opportunity for renewal, participation, and growth. I encourage our students, professionals, academics, researchers, and industry colleagues to actively engage with the Society, contribute to the journal and newsletter, participate in our activities, and continue advocating for the chemical engineering profession. Together, we can build an ESChE that is active, inclusive, professionally vibrant, and capable of making a meaningful contribution to Ethiopia's industrial and sustainable development.

I wish all our members a happy and peaceful Ethiopian New Year and a productive and successful year ahead.

Yours in service,

Tesfayesus Zinare (PhD)

President, Ethiopian Society of Chemical Engineers (ESChE)

Editor's Note

In this issue of ChE, we are pleased to feature an article on the timely and important topic of "Chemical Engineering Education in Ethiopia," alongside news and updates from the Society.

Following our call for contributions on this thematic topic, we were delighted to receive several thoughtful and relevant articles from our members. The encouraging response demonstrates the growing interest of our members in the newsletter and their willingness to share their knowledge, experiences, and perspectives with the wider chemical engineering community.

For this issue, and in the interest of brevity and avoiding repetition, we have synthesized the contributions into a single feature article that brings together the key themes and perspectives raised across the submissions. We are grateful to all members who shared their valuable insights and experiences. The additional contributions will be retained for consideration in future thematic issues, where they may be explored in greater depth.

We gratefully acknowledge the contributions of Habtamu Asmamaw, Dr. Molla Assefa, Tolessa Mengistu, Sintayehu Tekil, and Redeat Habtamu. Their thoughtful perspectives and practical insights have enriched the discussion on the future of chemical engineering education in Ethiopia and provided valuable input to this collective feature article.

We also encourage all members to continue participating actively in the Society's activities as well as to share their comments, suggestions, professional experiences, and articles with ChE. Your contributions help make the newsletter more relevant, diverse, and useful to our entire chemical engineering community.

November Thematic Topic: Career Shelf

For our November issue, we are pleased to announce "**Career Shelf**" as the next thematic topic. Through this theme, we invite members to share their career journeys, professional experiences, lessons learned, and practical advice with fellow chemical engineers. We particularly welcome perspectives on career pathways, opportunities in industry and academia, entrepreneurship, professional development, skills for the changing workplace, career transitions, and advice for students and early-career engineers.

We encourage experienced professionals, early-career engineers, recent graduates, and students alike to contribute. A career story does not have to be a story of extraordinary achievement;

experiences, challenges, turning points, and lessons learned can be equally valuable to others navigating their own professional paths.

We look forward to receiving your contributions and continuing the strong engagement demonstrated in this issue. Let us make the November "**Career Shelf**" a collection of experiences and insights that inform, inspire, and support the next generation of chemical engineers.

Chemical Engineers' Viewpoint

Chemical Engineering Education in Ethiopia: Bridging Fundamentals, Practice, and the Future

Introduction

Chemical engineering education has played an important role in developing the technical workforce needed for Ethiopia's industrial development. As the country continues to expand its manufacturing, agro-processing, pharmaceutical, energy, water and environmental, and other chemical and allied industries, the role of chemical engineers is becoming increasingly diverse. At the same time, rapid developments in digitalization, sustainability, advanced materials, biotechnology, process intensification, and the energy transition are changing the competencies expected of engineering graduates.

In response to our call for perspectives on **"Chemical Engineering Education in Ethiopia,"** members shared valuable reflections drawn from academic, professional, and industry experience. Although the contributors approach the subject from different angles, a common message emerges: the future of chemical engineering education should not be about replacing fundamental knowledge, but about connecting that knowledge more effectively to practical engineering, industry, technology development, and emerging challenges.

Strengthening the Foundation: From Separate Subjects to Integrated Engineering Thinking

The strong foundation provided by chemical engineering education remains essential. As Redeat Habtamu observes, subjects such as mathematics, physical and life sciences, material and energy balances, thermodynamics, fluid mechanics, heat and mass transfer, reaction engineering, process control, process design, and laboratory training provide the fundamental knowledge required to understand and analyze chemical processes.

However, in professional practice, these subjects do not exist in isolation. Tolessa Mengistu emphasizes that students should have greater opportunities to connect fundamental concepts through integrated engineering problems. Rather than learning thermodynamics, reaction engineering, transport phenomena, process control, and other subjects as separate areas of knowledge, students could be challenged to

apply them collectively to the development of an actual process or technology.

This integrated approach should begin even earlier, by strengthening the relationship among the basic sciences—chemistry, physics, and biology. These disciplines should not be perceived as distant or unrelated areas of study. Chemical engineering itself sits at the intersection of these sciences and many of the profession's most important developments—from biotechnology and pharmaceuticals to energy, materials, environmental engineering, and food processing—depend on their interaction.

A stronger integration of chemistry, physics, and biology could also help students appreciate why the laboratory matters. In particular, students should be encouraged to develop genuine interest in experimental investigation, including the chemistry of compounds, reactions, materials, and process phenomena. Laboratory work should not be viewed merely as a requirement for completing a course, but as an opportunity to observe, question, experiment, interpret, and discover.

The broader objective, therefore, should be a shift from learning individual subjects toward developing the ability to connect scientific principles and apply them to real engineering problems.

Bridging the University–Industry Gap

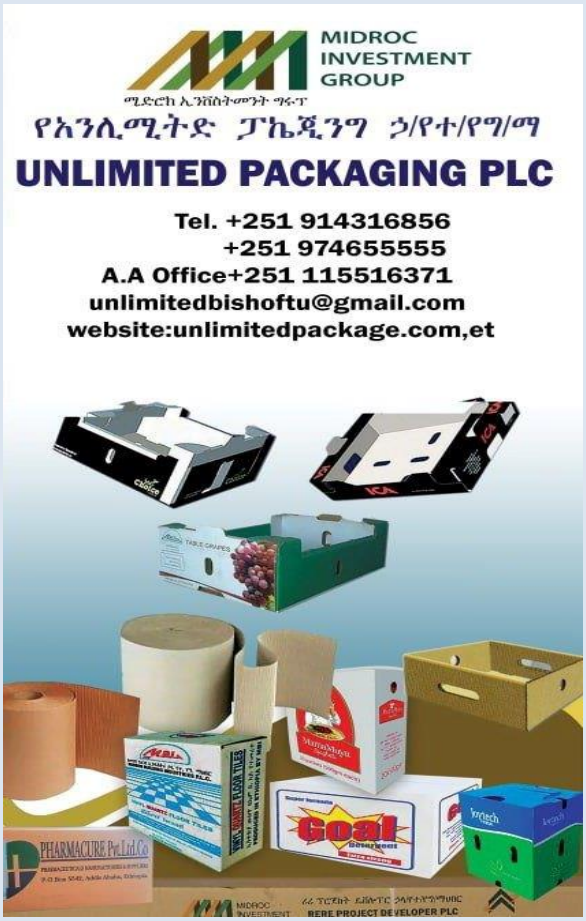
Perhaps the most consistent theme among the contributions is the need to strengthen the relationship between universities and industry. From his practical experience, Habtamu Asmamaw argues that stronger university–industry linkage is essential for providing students with practical exposure, internships, industrial experience, and ultimately better employment opportunities. He also suggests an annual professional forum bringing together university instructors, industry leaders, professionals from different sectors, and Ethiopian professionals living abroad to discuss the needs of the profession and the future direction of chemical engineering education.

Redeat Habtamu similarly highlights industrial internships, plant visits, industry-based design projects, guest lectures by practicing engineers, joint research, and industry case studies as practical mechanisms for connecting education with professional realities.

From a more experienced industry perspective, Dr. Molla Assefa makes an even stronger case for moving beyond formal or superficial university–industry relationships. He calls for resilient and active partnerships through which students can work on real industrial bottlenecks and universities can continuously assess whether

educational outcomes correspond to actual industrial performance requirements.

The message is therefore clear: industry should not merely be a destination for graduates; it should be an active partner in educating them.



From Classroom Theory to Practical Engineering

Practical learning is not simply about exposing students to industrial facilities. It is about giving them opportunities to think and act like engineers. Sintayehu Tekil captures this concern from the student and graduate perspective, arguing that university education should prepare students for the real world rather than focus primarily on examinations and grades. In addition to academic knowledge, graduates need practical skills, confidence, communication, decision-making, teamwork, problem-solving, and adaptability.

Similarly, Dr. Molla Assefa, drawing on more than two decades of experience in manufacturing, points to production inefficiencies, unsafe working conditions, rework, and other challenges encountered on the factory floor. His perspective emphasizes that the question is no longer simply what a chemical engineer should know, but how the engineer should think, act, solve problems, and deliver value.

Tolessa Mengistu proposes an especially useful practical framework: students could be asked to take a process or technology from laboratory concept through process-flow development, material and energy balances, equipment design, simulation, control and safety considerations, and eventually scale-up assessment. Such integrated projects would help students understand the challenges of moving from laboratory experimentation to pilot and industrial application.

This type of learning can help transform the student from a passive recipient of knowledge into an engineer capable of investigating, designing, evaluating, and improving processes.

Making Process Safety a Core Engineering Mindset

Process safety deserves particular attention in curriculum development. Rather than being confined to one dedicated course or treated as an isolated topic, process safety should be integrated throughout the chemical engineering curriculum.

Safety considerations naturally arise in thermodynamics, reaction engineering, fluid mechanics, heat and mass transfer, process design, process control, laboratory work, equipment design, and plant operations. Students should repeatedly be challenged to ask not only whether a process works, but also what can go wrong, how hazards can be identified, how risks can be assessed, and how inherently safer designs and operating practices can be developed.

This approach would reinforce the industry perspective articulated by Dr. Molla Assefa, who emphasizes occupational safety as a fundamental professional discipline and argues that safety should become a mindset rather than simply another module to be completed.

Embedding safety across courses would help develop engineers who instinctively incorporate risk considerations into design and decision-making rather than treating safety as an afterthought.

Re-examining Core Subjects in Light of Current Practice

Curriculum modernization should also include a critical examination of whether the way some core subjects are taught adequately reflects contemporary engineering practice. For example, separation processes are increasingly complex and involve multiple driving forces and transport mechanisms. Reliance on concentration gradients alone as the dominant conceptual framework may no longer provide students with a sufficiently broad understanding of contemporary separation technologies. Students should be exposed to the wider range of driving forces, coupled transport phenomena, membrane-based processes, pressure-driven separations, thermal and electrical approaches, and other emerging technologies where relevant.

Similarly, process control education should reflect the realities of Ethiopian industry. Much conventional control teaching is built around continuous processes, yet many industrial operations in Ethiopia are batch or semi-batch in nature. Curriculum design should therefore ensure that students understand batch-process dynamics, recipe-based control, sequencing, monitoring, automation, and the specific challenges associated with batch operation.

The point is not to discard established theory. Rather, core chemical engineering

subjects should be periodically reviewed to ensure that the examples, applications, and practical emphasis reflect the processes graduates are likely to encounter.

Technology Development, Modelling, Simulation and Scale-Up

The ability to translate ideas into viable technologies is another important area highlighted by the contributors. According to Tolessa Mengistu, chemical engineering education should give greater visibility to process and equipment design, modelling and simulation, laboratory experimentation, scale-up, technology development, techno-economic analysis, and technology maturity assessment. A technology that performs well at laboratory scale may not necessarily be technically or economically viable at commercial scale. Students therefore need to learn how to assess capital and operating costs, energy requirements, resource consumption, process performance, risks, and technology readiness.

This perspective is particularly relevant to Ethiopia, where developing domestic technological capability and adapting technologies to local resources and industrial conditions can contribute significantly to industrial development.

Redeat Habtamu likewise emphasizes process simulation and engineering software while cautioning that students should understand the engineering principles, assumptions, and limitations underlying computational results—not merely learn how to operate software.

Preparing for Digitalization and Industry 4.0

The chemical engineering profession is also being reshaped by digital technologies. Dr. Molla Assefa argues that data science, artificial intelligence, machine learning, computer-aided simulation, cloud-based data manipulation, and real-time process tracking should become important components of chemical engineering education. In his view, the future engineer must be capable of using process data to generate actionable insights and improve industrial performance.

Redeat Habtamu makes a complementary argument: digital tools should be introduced as extensions of fundamental engineering principles. Graduates should develop foundational competence in programming, data analysis, simulation, and artificial intelligence while retaining the ability to exercise engineering judgment.

The objective, therefore, should not be to turn every chemical engineer into a computer scientist. Rather, it should be to develop engineers who can combine chemical engineering knowledge with modern computational and data-driven tools.

Sustainability and the Emerging Industrial Landscape

Sustainability is another area where chemical engineering education must evolve. Tolessa Mengistu recommends integrating life-cycle thinking into engineering design so that students consider material and energy consumption, emissions, waste, carbon footprint, water use, resource efficiency, circularity, and end-of-life impacts when evaluating process alternatives.

Dr. Molla Assefa similarly identifies green chemistry, carbon management, life-cycle assessment, circular economy principles, and closed-loop manufacturing as important areas for the future curriculum. He also points to emerging fields such as green hydrogen, Power-to-X technologies, energy storage, advanced materials, biotechnology, and nanotechnology.

Redeat Habtamu emphasizes that sustainability should not be confined to a separate environmental course. Instead, it can be integrated into engineering projects where students evaluate technical, economic, environmental, and resource implications together.

This broader perspective is important because the modern chemical engineer must increasingly recognize that technical feasibility alone does not define a good engineering solution.

Developing the Professional Engineer, Not Only the Graduate

A recurring message across the contributions is that academic achievement is important but insufficient. **As** Sintayehu Tekil notes, grades matter, but they do not constitute the entirety of professional preparedness. Communication, confidence, problem-solving, teamwork, decision-making, practical experience, and adaptability are equally important in the workplace.

Dr. Molla Assefa extends this perspective to professional discipline, emphasizing process operations, asset management, quality practices, occupational safety, and continuous improvement methodologies such as Lean Manufacturing, ISO management systems, Plan-Do-Study-Act cycles, and Total Productive Maintenance.

Habtamu Asmamaw also points to the importance of recognizing the diversity of career opportunities available to chemical engineers. He notes that graduates may encounter relevant positions under titles such as Production Engineer, Process Engineer, Process Engineering Specialist, or Production Engineering Specialist. Greater awareness of these pathways could help graduates better understand and pursue employment opportunities.

Professional accreditation and licensure could also form an important part of strengthening the profession. The accreditation of chemical engineering programs should be meaningfully connected with the professional standards expected for the issuance of a Professional Engineer license. Such a linkage could provide a clearer pathway from accredited education to professional practice, while encouraging universities to demonstrate that graduates possess defined competencies required by the profession.

This would also strengthen accountability among educational institutions, professional bodies, and industry stakeholders and help establish a more clearly recognized professional pathway for chemical engineers.

Continuous Curriculum Development

Finally, curriculum reform should not be treated as a one-time event. Redeat Habtamu emphasizes continuous engagement among universities, industries, professional societies, researchers, alumni, and students. Alumni, in particular, can provide valuable feedback on which competencies proved useful in professional practice and where graduates felt insufficiently prepared.

The proposal from Habtamu Asmamaw for an annual professional discussion forum provides one possible mechanism for sustaining this dialogue. Such a forum could help identify changing industrial requirements, review curriculum relevance, strengthen partnerships, and generate recommendations for the continuing development of chemical engineering education.

Conclusion

The contributions received in response to our call reveal a strong degree of convergence among members, despite differences in professional background and emphasis. The challenge facing chemical engineering education in Ethiopia is not simply to add more courses or introduce every emerging technology into the

curriculum. Rather, it is to build an integrated educational model that preserves strong fundamentals while developing practical engineering competence, digital fluency, sustainability awareness, professional skills, process-safety consciousness, and the ability to solve real problems.

The chemical engineer of the future should be able to connect chemistry, physics, biology, and engineering principles; understand and design processes; conduct and interpret laboratory experiments; model and simulate systems; recognize and manage process hazards; control both continuous and batch operations; assess economic and environmental performance; and adapt to emerging technologies.

Achieving this vision will require sustained collaboration among universities, industries, professional societies, alumni, researchers, students, and policymakers. It will also require continuous review of what we teach, how we teach it, and how we determine whether graduates are truly prepared for professional practice.

The goal should be more than producing graduates who have successfully completed a degree. It should be to develop competent professional engineers who are ready to enter the workplace, solve problems, create and adapt technologies, improve industrial performance, uphold safety, and contribute to Ethiopia's sustainable industrial transformation.

The discussion initiated by this article is therefore more than a curriculum debate. It is an opportunity for the chemical engineering community to collectively consider what kind of engineer Ethiopia needs and what kind of educational system is required to produce that engineer.

Who Invented the Chemical Engineer?

The story of George E. Davis and the birth of a profession

Today, chemical engineering seems like an established discipline. Chemical engineers design reactors and separation processes, calculate heat exchangers, develop control systems and optimize production chains. But in the middle of the nineteenth century, there was no clearly defined profession called chemical engineering. Chemical factories existed, yet the people working in them were chemists, mechanical engineers, managers and experienced works personnel. So, where did the chemical engineer come from?

A discipline without a single inventor

One important figure in answering this question was **George Edward Davis (1850–1907)**, often described as the father of chemical engineering. The label is useful, but the history is more nuanced: new disciplines rarely have a single inventor. Davis's importance lies in how he helped articulate a systematic way of thinking about industrial chemical production.

Davis was born in Eton in 1850 and studied at the Royal School of Mines in London. Although his formal education was in chemistry, his experience in Britain's rapidly expanding chemical industry shaped his thinking. He worked in chemical plants in the Manchester region, where sulfuric acid, soda, dyes, soap, fertilizers and other chemicals were being produced on increasingly large scales.

From laboratory chemistry to industrial reality

Industrial scale-up created problems that could not be solved by chemistry alone. A reaction that worked in a laboratory flask did not automatically explain how to operate a vessel containing thousands of liters. Raw materials had to be transported and mixed; heat had to be supplied or removed; gases and liquids had to contact one another; and products had to be separated and purified. Pumps, pipes, furnaces, filters and condensers had to work together reliably and economically.

Davis was also involved in inspecting chemical works under British legislation concerning harmful emissions from alkali factories. This gave him exposure to different factories and manufacturing processes. He began to notice something fundamental: although factories made very different products, many of the physical operations inside them were remarkably

similar.

The insight: recurring operations

Instead of asking only how a particular product was manufactured, Davis focused on operations that appeared repeatedly across industries. Distillation, for example, is not inherently a whisky, petroleum or solvent-recovery operation. In each case, separation exploits differences in volatility. Likewise, filtration, evaporation, absorption and crystallization can be understood through general principles rather than as isolated techniques belonging to individual industries.

"The chemistry differed, yet many of the engineering problems repeated themselves."

From shared principles to transferable engineering knowledge

This shift in perspective made engineering knowledge transferable. If the principles governing a separation process are understood, they can potentially be applied to products or industries that did not exist when those principles were first studied. In 1887, Davis organized these ideas into a series of twelve lectures at the Manchester Technical School, regarded in the source as one of the earliest systematic attempts to teach chemical engineering.

HOW THE IDEA DEVELOPED

From Davis's Lectures to Modern Chemical Engineering

The discipline grew by organizing recurring industrial problems into general engineering principles.

The handbook that gave the field a name

Davis continued developing his ideas and, in 1901, published the two-volume *A Handbook of Chemical Engineering*. The title itself reflected a discipline that was still establishing its identity. The handbook brought together a broad range of industrial equipment and operations, including fuels and furnaces, transport of materials, evaporation, distillation, absorption and extraction.

The source cautions against viewing Davis as the creator of modern chemical engineering. Thermodynamics would later become more rigorous, reaction engineering would emerge as a distinct field, and the unified treatment of momentum, heat and mass transfer would develop much later. Process control and computer-aided process systems engineering belonged to a still more distant future. Davis's contribution was instead to help establish that chemical manufacturing required its own systematic body of engineering knowledge.

Across the Atlantic: the rise of unit operations

Similar developments were taking place in the United States. In 1888, MIT introduced what is generally regarded in the source as the first four-year chemical engineering curriculum in the United States. Educators faced a central question: what should distinguish a chemical engineer from a chemist or a mechanical engineer?

An influential answer emerged in the early twentieth century through the concept of **unit operations**, particularly associated with Arthur D. Little at MIT. Instead of organizing chemical engineering around individual industries, education could be structured around common operations such as distillation, drying, filtration, evaporation, crystallization and fluid flow. A chemical plant could therefore be understood as a sequence of recurring building blocks. Davis had already been moving in a similar intellectual direction in Britain decades earlier.

THEN	NOW
➢ Different factories and products were often taught as separate processes. ➢ The challenge was to make chemistry work reliably and economically at industrial scale.	➢ Chemical engineers decompose plants into operations, connections and interacting systems. ➢ Flow sheets, mass and energy balances, optimization, control and process systems connect the pieces.

Why Davis’s question still matters

The historical idea still feels surprisingly modern. A brewery can be viewed through mixing, reaction, heating, cooling, separation and control. A refinery can be understood as a network of reactors, heat exchangers and recycle streams. Even a coffee machine can be considered in terms of heating, pressure drop, extraction and mass transfer. Chemical engineering education trains us to see the recurring principles beneath different processes.

During the twentieth century, unit operations were complemented by thermodynamics, transport phenomena and reaction engineering. Later, process control and process systems engineering increasingly focused on interactions among individual units. Today, chemical engineers model complete plants, optimize systems and increasingly consider supply chains beyond the factory gate.

So, who invented the chemical engineer?

George E. Davis did not single-handedly invent chemical engineering. The discipline emerged gradually from chemistry, mechanical engineering, thermodynamics and the accumulated practical knowledge of the chemical industry. His lectures and handbook, however, helped articulate the idea that chemical manufacturing required systematic engineering knowledge. Perhaps that is why Davis deserves to be remembered: not for a famous equation or spectacular reaction, but for helping establish a way of looking at industrial processes—beyond the individual product and toward the common operations and principles underneath. More than a century later, that remains close to what chemical engineers are taught to do.

Source / Further reading: This article is adapted from a LinkedIn post "Engineering Mysteries #27: Who Invented the Chemical Engineer?", by Edwin Zondervan, Full Professor of Process Systems Engineering at the University of Twente.
The source cites: Peter Reed (2020), *George E. Davis (1850–1907): Transition From Consultant Chemist to Consultant Chemical Engineer in a Period of Economic Pressure*, *Ambix*, 67(3), 252–270.

Society News

ISID Scholarship Programme: Supporting the Next Generation of Researchers

The Ethiopian Society of Chemical Engineers (ESChE) recently organized an induction session for recipients of the **ISID Scholarship Programme**, bringing together the new scholars, experienced researchers, and experts to share knowledge and expectations for the journey ahead.

We extend our heartfelt gratitude to Professor Desta Mebratu for his continued leadership and commitment to the ISID initiative, which plays a vital role in fostering research and innovation among the next generation of Ethiopian chemical engineers.

The session opened with an introduction to ESChE and the ISID Scholarship Programme, presented by Dr. Tesfayesus Zinare, focusing on the programme's objectives, expectations, and the opportunities available to the scholars. This was followed by an engaging presentation by Prof. Desta Mebratu on “Sustainability Innovation and the Circular Economy: Concepts, Opportunities, and Future Directions,” highlighting the growing importance of sustainability-oriented innovation.

The scholars also benefited from an experience-sharing session, where former ISID Scholarship recipients Eng. Redeat Habtamu and Eng. Solomon Checkole reflected on their experiences, shared lessons learned, and offered practical advice to the new scholars.

ESChE congratulates the current scholarship recipients: Wubshet Alemu of Addis Ababa University (AAU), who is pursuing his PhD research, and Nurye Zewdu, Sarah Nureddin, Temesgen Belayhun, and Dibora Yohanis of Addis Ababa Science and Technology University (AASTU), who are undertaking their Master's thesis research.

The first installment of the 2026/27 Research Grant has been disbursed to the five selected student researchers. The initiative was supported by an **ETB 200,000 contribution from Prof. Desta Mebratu**, founder of ISID-Ethiopia, to support research activities and encourage innovation among emerging chemical engineering researchers in Ethiopia. A total of ETB 100,000 was disbursed as the first installment on July 28, 2026, with each Master's student receiving ETB 18,750 and the PhD recipient receiving ETB 25,000.

Following the disbursement, the recipients have commenced their research activities and begun implementing their projects. The grant provides financial support to facilitate

their research work and contribute to the development of research and innovation in areas relevant to chemical engineering and Ethiopia's development priorities.

The Society wishes all the scholars a successful and rewarding research journey and looks forward to seeing the knowledge and research outcomes they will contribute to their respective fields and beyond.

Student Chapters: A Framework for the Future

ESChE is pleased to announce that the Student Chapter Framework has been finalized by the Executive Committee. The framework outlines the structure, benefits, responsibilities, and minimum requirements for establishing and sustaining active ESChE student chapters.

During the current academic year, the framework will be introduced initially through a pilot programme in three universities. The initiative represents an important step toward creating vibrant student communities that promote professional development, networking, knowledge exchange, and leadership among chemical engineering students.

Students and universities interested in establishing an ESChE Student Chapter are encouraged to review the minimum requirements and submit their request accordingly. The Student Chapter Framework is available on the ESChE website for interested students and institutions.

Journal Development: A New Chapter for Research and Knowledge Exchange

Another important milestone for the Society is the continued development of the Journal of the Ethiopian Society of Chemical Engineers (JESChE**)**, which is now officially integrated into the ESChE website.

Established in 1995, the Journal has long provided a platform for research in chemical engineering science, process engineering, food and biochemical engineering, cleaner production, and related fields. Its integration into the Society's website marks an important step forward, providing a fully open-access online platform that makes it easier for researchers to explore the Journal and submit their manuscripts.

This achievement was made possible through the dedication and commitment of several colleagues who contributed their time and expertise. ESChE sincerely acknowledges **Prof. Solomon Workneh, Public Relations Officer; Dr. Girma Gonfa, Editor-in-Chief; Dr. Zinabu Hailu, Managing Editor; and Dagim Badeg, Website Manager**, for their valuable contribution in bringing this initiative to life.

The Editorial Board members were also recently brought together for a presentation

and discussion on the vision and future direction of the Journal. The session highlighted progress made so far, short- and long-term priorities, and the expected support and contributions of Editorial Board members. The discussion generated constructive feedback and valuable ideas for further strengthening the Journal and enhancing its visibility.

With the Editorial Board now actively engaged and the online platform in place, ESChE looks forward to further developing JESChE as a respected platform for research, innovation, and knowledge exchange, while increasing the visibility of Ethiopian chemical engineering research.

Regional and Diaspora Chapters

Building on the progress made in strengthening student engagement, the ESChE Executive Committee is also planning to further advance the establishment of regional and diaspora chapters.

These initiatives aim to extend the reach of the Society beyond its current networks, connect chemical engineering professionals across different regions of Ethiopia and around the world, and create stronger opportunities for collaboration, professional engagement, and knowledge exchange.

By strengthening connections among professionals locally and internationally, ESChE hopes to build a more inclusive and active professional community where members, regardless of their location, can participate in and contribute to the growth of the Society and the advancement of the chemical engineering profession.

Interested ESChE members from different professional background are invited to contribute and get involved in these chapters' preparations.

ESChE Membership Renewal Campaign

ESChE recently conducted a social media campaign through its Telegram and LinkedIn platforms to encourage members to renew their membership by paying their annual membership fees.

The campaign has generated encouraging engagement, with more than 10 members renewing their membership during the past three weeks. The Society continues to encourage members whose memberships have expired to renew and remain actively connected with the professional community.


Ethiopian Society of Chemical Engineers (ESChE)
25 YEARS OF ESChE
The Next Chapter Starts With You!
RENEW YOUR ESChE MEMBERSHIP
Stay connected. Keep learning. Keep contributing.
CONNECT
Network with professional engineers and experts across Ethiopia and beyond.
LEARN
Access knowledge, events, publications, and professional development opportunities.
ENGAGE
Be part of a strong community advancing chemical engineering for a sustainable future.
CONTRIBUTE
Make a difference in the profession, industry, and the nation through collaboration and leadership.
MEMBERSHIP FEE
ETB 1,000 / YEAR
New members: ETB 100 registration fee
PAYMENT DETAILS
Commercial Bank of Ethiopia (CBE)
Account No.: 1000003788184
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Together, let's build a stronger chemical engineering community and shape Ethiopia's sustainable future.
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📣 **JOB OPPORTUNITY – Quality Inspector**

The Ethiopian Society of Chemical Engineers (ESChE) is pleased to share an employment opportunity for two fresh graduate Chemical Engineers.

- **Position:** Quality Inspector
- **Number of Positions:** 2
- **Company:** Flexible Packaging Manufacturing Company
- **Location:** Addis Ababa, Ethiopia
- **Employment Type**: Full-time
- **Experience:** Fresh Graduates
- **Salary:** Company scale and negotiable
- **Application Deadline:** September 11, 2026

Qualifications and Requirements

- ✓ Bachelor's degree in Chemical Engineering.
- ✓ Fresh graduates are encouraged to apply.
- ✓ Must be a registered member of the Ethiopian Society of Chemical Engineers (ESChE).

How to Apply

Interested candidates should send their application via email to: tesfayesuszinare@eschenew.com

Please use "Quality Inspector Head" as the subject line of your email.

📌 **Note**: Only applicants who meet the ESChE membership requirement will be considered.

Ethiopian Society of Chemical Engineers (ESChE)

Connecting Chemical Engineers with Professional Opportunities

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Creating opportunities.
Connecting expertise.
Strengthening our profession.

Schlumberger Foundation

Faculty for the Future Fellowship 2027

Opportunity for Women in STEM

ESChE is pleased to share the **Schlumberger Foundation Faculty for the Future Fellowship 2027**, supporting women from developing and emerging countries pursuing PhD or postdoctoral studies in STEM abroad.

Key Eligibility Requirements

- Be a woman and citizen of an eligible developing or emerging country.
- Be pursuing a PhD or postdoctoral research in a STEM discipline.
- Have applied to, been admitted to, or be enrolled at a recognized host university/ research institute abroad.
- Have an excellent academic record.
- Demonstrate teaching experience, leadership, community engagement, and commitment to encouraging women and girls in STEM.
- Show a clear commitment to contributing to your home country/region after your studies.

Application deadline
November 7, 2026

Reference letters deadline
November 14, 2026

Learn more & apply
https://www.fftf.slb.com/

The competition is highly competitive. The Foundation considers academic performance, research proposal quality, references, teaching, relevance to home country, commitment to inspiring women in STEM, and host university quality.

Important to Note

This is an open opportunity.
Applicants are free to choose their own host institution, supervisor, and research area. You do not need to work with ESChE or any particular individual to apply. Applicants are responsible for identifying their host university and prospective supervisor. (See official FAQ for details.)

Additional Support (Where Relevant)

Through its professional network, ESChE may help facilitate connections where appropriate. A member of the ESChE Editorial Board at Arizona State University (ASU) has kindly offered to support highly qualified candidates who independently choose to work with him, subject to the fellowship and ASU processes.

ESChE is committed to
connecting our members with academic and professional opportunities.

Learn | Grow | Collaborate | Build a Sustainable Future

HOW TO BECOME A MEMBER OF ESChE

Ethiopian Society of Chemical Engineers

Advancing Chemical Engineering for a Sustainable Future

1 Visit the ESChE website

and complete the online membership registration form with your personal and professional information using the link:

https://www.eschenew.com/register/

2 Pay the applicable membership fee

using the ESChE bank account:

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If you are a **student**, the current annual membership fee is **ETB 100**, with a one-time registration fee of **ETB 10** for new members.

If you are **not a student**, the current annual membership fee is **ETB 1,000**, with a one-time registration fee of **ETB 100** for new members.

3

Remember to email the bank payment statement to ESChE at **info@eschenew.com** and send it to the Telegram number **+251913360917** to allow the Society to verify and activate your membership.

4

Once your payment and registration have been verified, **your ESChE membership will be activated**, and you will be able to access the benefits and activities available to members.

5

You can pick up your ID at the ESChE office in **College of Technology and Built Environment/ Addis Ababa University.**

(Please keep in mind that your ID requires one passport-sized photograph.)

For more information about membership categories, fees, and benefits, please visit the Membership section of the ESChE website.

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