

MAPÚA'S INTERNATIONALLY ACCREDITED PROGRAMS:

Raising the quality of Philippine education

After establishing itself as the leading technological school in the country, Mapúa Institute of Technology has successfully achieved its global status with an international accreditation for its academic programs.



Now, Mapúa responds to the challenge of globalization for the Philippine education sector with 10 ABET-accredited programs. Following the accreditation of its B.S. Computer Engineering, B.S. Electrical Engineering, and B.S. Electronics Engineering programs in 2010, ABET recently granted accreditation to Mapúa's five other engineering and two computing programs: B.S. Chemical Engineering, B.S. Civil Engineering, B.S. Environmental and Sanitary Engineering, B.S. Industrial Engineering, B.S. Mechanical Engineering, B.S. Computer Science, and B.S. Information Technology.

"It shows that we can hang on to a grand vision and at the same time slog through the quotidian," was the reaction of Mapúa's president and chief executive officer Dr. Reynaldo B. Veja to the school's recent achievement. "I think that the Mapúa community can be justifiably proud of this singular achievement because it has come after years of unflagging hard work and superb teamwork. While it serves Mapúa well, it also improves the standing of Philippine engineering education before the international community of engineers and computing professionals."

ABET is the leading accrediting body for applied science, engineering, computing, and technology programs at universities and colleges worldwide. With this, the Institute believes that the accreditation of its programs will give mobility to Filipino engineers and IT professionals to practice their profession in other countries where ABET is recognized.

"We can safely say that our engineering and computing programs are equal in standards with those offered in prominent universities in the USA," said Engr. Conrado V. Navalta, director of Mapúa's Continuous Quality Improvement Office.

Outcomes-Based Education

The ABET seal of quality education means a lot for a school that seeks global status, as it entails establishment of a rigorous education system that will enable the school to produce graduates that are sure to meet international standards - the Outcomes-Based Education system (OBE).

"Mapúa is the first school in the country to adopt the OBE," said executive vice president for Academic Affairs Dr. Bonifacio T. Doma Jr. "It basically zeroes in on outcomes."

OBE focuses on two kinds of outcomes: the Student Outcomes and the Program Educational Objectives. Student Outcomes define the skills that students must have at the time of graduation, whereas the Program

Educational Objectives pertain to what the school desires for its graduates to achieve so many years after graduation. This is followed by the assessment and evaluation process.

"For the assessment, tools are identified to determine if the outcomes are achieved and to what degree," continued Dr. Doma. "After all data are gathered, the evaluation process ensues using performance criteria and a set of rubrics. Based on the evaluation results, recommendations for the improvement of the program are made. The continuous quality improvement (CQI) loop is closed by implementing the recommendations made. CQI is one of the major criteria in ABET accreditation."

Commitment to excellent education

It has not been simple and easy for the Institute to have its 10 programs accredited by ABET. Mapúa's faculty has invested countless man-hours to have its curricula brought up to a higher level. For this, the Mapúa administration commends them.

"It's definitely a collaborative achievement because it really takes a village to achieve this feat. It is not only intensive in terms of the financial aspect but more so in terms of the number of people who must be involved and who must believe in OBE," commented Dr. Doma.

Dr. Veja, furthermore, emphasized that the purpose behind the Institute's shift to OBE is bigger than the ABET accreditation.

"Before we embarked on the road to ABET accreditation, we had to ask ourselves whether this was going to be a mere 'paper chase', and our answer was 'No'. We were not just going for the certificate; we believed enough in the effectiveness and robustness of an outcomes-based approach to education and its accompanying Continuous Quality Improvement system that we were going to do it regardless."

He continued: "Needless to say, our other programs are subject to the same belief and infused with the same enthusiasm for its realization. Even without a corresponding accreditation label, these programs are embodiments of the same philosophy and principles of quality education that apply to our engineering and computing programs."

Dr. Veja assures that this is not the end of Mapúa's journey to excellence in education.

"We are fine-tuning our CQI system especially in the area of devising effective assessment tools. We are also strengthening our links with industry to refine our statements of program educational objectives and desired student outcomes." ■



It is a great time to be a Mapúan!

The ABET accreditation of 10 of our academic programs is a momentous milestone not just for the Institute but for the whole country. This is a validation of our commitment to produce outstanding graduates and provide them with unparalleled opportunities to showcase their expertise to the whole world. To everyone who made it all possible, congratulations!

Ambassador Alfonso T. Yuchengco
Chairman
Yuchengco Group of Companies

Congratulations on the ABET accreditation of 10 of your programs! As the only school in East Asia to maintain this highly rigorous accreditation, you certainly should be proud. Mapúa of course has a storied history, but this accomplishment demonstrates that it is on the cutting edge of hi-tech engineering and nanotechnology research. Also, Mapúa's international collaborations with Taiwanese, Japanese and US universities show that its educational respect stretches far. I salute the professors, administrators and the students for this exceptional achievement.

With best wishes, I remain.

Harry K. Thomas, Jr.
United States Ambassador

No higher educational institutions in East Asia have ABET accredited programs in any field, except Mapúa. You have 10! Congratulations to your Board of Trustees, your President and the entire Mapúa staff for this monumental achievement! You have set a very high bar for quality engineering and computing education in the Philippines. It is an honor to be associated with you as your consultant.

Jose B. Cruz, Jr.
Professor Emeritus, Department of Electrical and Computer Engineering, and former Dean, College of Engineering, Ohio State University

In behalf of PTC, I congratulate Mapúa for the milestone-setting ABET accreditation of its 10 academic programs.

This has raised the bar as far as the quality and accreditation of the nation's engineering programs is concerned. It showed that we can meet the world's stringent accreditation criteria and standards. Mapúa did it by reshaping and redirecting its programs toward outcomes-oriented delivery.

It also lends a positive note to our aim to join the Washington Accord.

Maligayang Pagbati at Mabuhay Tayong Lahat!

FEDERICO A. MONSADA, MEng, ASEAN Eng.
President, Philippine Technological Council

Congratulations for now we have 10 ABET-accredited programs to boast about!

This success could not be attributed to an individual's efforts alone but to all men and women who tirelessly worked together as a team amid all challenges and difficulties to achieve a common goal - obtaining the international accreditation.

My sincerest thanks to all the administrators, officers, faculty members, employees, and students who have worked countless days to comply with the ABET requirements.

Off we go for more!

Bonifacio T. Doma Jr., Ph.D.
Executive Vice President for Academic Affairs

With all honor and pride, I would like to congratulate Mapúa Institute of Technology for the accreditation of 10 of its programs by ABET. It will surely give our graduates the edge when applying in prestigious companies not just in the Philippines but also abroad. This milestone is indeed another reason for every Mapúan to become proud.

Viva Mapúa!

Engr. Lemicio "Lemy" J.S. Roxas
ME 64 TOM 08
President, National Association of Mapúa Alumni (NAMA)

Journey to academic excellence: Mapúa's road to ABET

Even for an educational institution with over 85 years of producing some of the country's top-notch engineers and architects, there are no shortcuts to excellence.

The Mapúa Institute of Technology had to make significant paradigm shifts, adopt education reform measures, and commit itself to a continuous quality improvement (CQI) system to achieve world-class status. As a result of these efforts, 10 of its engineering and computing programs obtained accreditation by the US-based ABET, the sole certifying body for post-secondary education programs in applied science, computing, engineering and technology.

The commitment to pursue ABET accreditation is the institute's response to the growing clamor for a more global outlook on education – a viewpoint that was instituted by the Yuchengco Group of Companies (YGC) when it took over the management of the school in 1999. To implement this goal, the conglomerate couldn't have chosen a better man than Dr. Reynaldo B. Veja, currently Mapúa's president and chief executive officer.

Step 1: Vision

"When we came in 1999, we stated in no uncertain terms that we will lead the Institute's response to the challenge of globalization," he said. "Our vision was for Mapúa to become an international center of excellence. We accelerated the further development of our graduate programs and, correspondingly, our research capabilities."

Dr. Veja's own outlook is enriched by his experiences working abroad as a naval engineer, and he has meticulously been applying his global knowledge and insights since his appointment at Mapúa. "We believe in the existence of a global, knowledge-based, technology-driven economy," he said. "I could not have truly appreciated this fact had I not been exposed to its workings internationally and in the US."

"Having done research in US graduate schools and having worked for US companies, I know the importance of knowledge in gaining and maintaining competitive edge," he continued. "What the Philippines and the region need to develop are strong research organizations that are the fountainheads of new knowledge that lead to new products, systems, and processes. We, at Mapúa, want to contribute to this effort by engaging in research with high socio-economic impact."

Dr. Veja's vision, combined with the resources of the YGC, brought Mapúa's standard to the world class level.

Step 2: Implementation

However, one must shed tradition to get to this level. "It has first to be understood though that in order to get ABET accreditation, we have had to subscribe to the concept of outcomes-based education," he said, referring to the student-centered learning philosophy that empirically measures student performance rather than relying on the still widely held traditional or inputs-based education.

"We have had to correspondingly revise our curricula and syllabi in a significant way," he continued. "We also have had to build a continuous quality improvement, or CQI, system whereby we can progressively improve the level of attainment of our designed student learning outcomes."

With all the changes and innovations put in place, Mapúa sought the accreditation of its programs by the international body. Dr. Veja stated that ABET prescribes different lists of learning outcomes for academic programs in engineering, computing, applied science, and technology. The lists of learning outcomes are expressed in terms of competencies required for the global practice of these disciplines.

After months of evaluation, ABET gave its accreditation first to the three programs of Mapúa, namely Electrical Engineering, Electronics Engineering, and Computer Engineering, in 2010. In August of this year, seven of the Institute's programs, including two computing courses, were also given the accreditation. These are Chemical Engineering, Civil Engineering, Computer Science, Environmental and Sanitary Engineering, Industrial Engineering, Information Technology, and Mechanical Engineering.

"Being accredited by an external body like ABET, our programs have been determined to produce graduates who are suitably educated and are ready to perform on the global stage," he said.

For decades, Mapúa has been producing alumni whom Dr. Veja said are "helping make companies all over the world run." The ABET accreditation puts an official stamp on this assertion.

"It is totally different when a well-respected external party is the one that declares that the quality of one's educational programs is at par with those of the best in the world," he said.

Step 3: Accreditation – and beyond

Mapúa now takes pride in being the first and only school in East Asia to obtain the ABET accreditation. Graduates of the 10 accredited courses will be given greater opportunities to showcase their skills here and abroad.

Consequently, Mapúa has become a magnet for other schools from neighboring countries that aspire to get the same distinction.

Officials of FPT University of Vietnam recently visited Mapúa to learn more about the school and the ABET accreditation process. Likewise, the University of Guam (UOG) also recently signed a memorandum

of agreement to develop academic relations with Mapúa to support UOG's efforts to establish its own engineering school.

The agreement will enhance relations between the two institutions as they hope to promote cooperation in such areas as faculty and student exchanges, training and study programs, collaborative teaching projects and scholarships, and other mutually beneficial endeavors.

Dr. Veja pointed out though that the accreditation process is just the start. "Being a center of excellence in the global arena requires a lot more," he said. "We need to heavily involve ourselves in research, for one. This is why our number one strategic initiative is the further

vertical articulation of our programs – the development of master's and doctoral programs and the accompanying research capability. Eventually, we want all our faculty members to be working at the frontiers of knowledge."

"What we have to do in the years to come is to refine our continuous quality improvement system so that it truly results in the improvement of the quality of a Mapúa education," he continued. "This is one of the keys to maintaining our accreditation."

Mapúa's journey to educational excellence involves many other areas for continuous academic improvement. "We have integrated Cisco training into our IT curriculum, which our students take for credit," Dr. Veja disclosed. "We have also partnered with HP to integrate HPUX into our curriculum. Likewise, Sun Microsystems is our partner in the offering of Java. Along similar lines, we have partnered with Microsoft."

"Accenture, which hires a good number of our graduates, sends us adjunct professors," he continued. "Eight years ago we partnered with Emerson Process Management, which set up a state-of-the-art control systems laboratory in our school in order for our faculty to train their engineers. These engineers trouble shoot controls systems out of a contact center in Manila – a very advanced type of IT-enable service, one might say. When the laboratory was not being utilized for Emerson, we used it to run generic type courses in control systems for our own students. All these tie-ups lent immediate relevance to our courses and programs."

An alliance with engine designer and power provider Cummins, Inc. also produced the first technical training center in the Philippines inside the campus. Mapúa has also recently partnered with Netsuite to offer its students an elective course in cloud computing using the latter's technologies.

The world's leading business analytics service provider SAS also forged an agreement with the Institute under the SAS Global Academic Program, in order to enhance business intelligence and analytics education in the country. Likewise, a membership with the SAP University Alliance Program has allowed Mapúa to provide students with the advanced tools and resources needed to learn how technology can enable integrated business processes and strategic thinking, making them more marketable and employable upon graduation.

The ABET accreditation, significant as it is, marks but a milestone in the Institute's endless journey towards excellence. "We guarantee that there is more to come," vowed Dr. Veja. "Mapúa will achieve greater heights in the local academic scene and in the international professional arena." ■

A Quick Guide to ABET

What is ABET?

Composed of more than 2,000 professionals from the academe, government, and private sectors worldwide, US-based ABET is a non-profit group that accredits college and university programs in applied science, computing, engineering, and technology. The international group reviews the academic programs of an educational institution to ascertain their relevance, content, and quality.

Why would I take up an ABET-accredited program?

Since the international accreditation is an assurance of quality education, Filipino graduates of ABET-accredited programs enjoy a great deal of advantage especially in terms of employment and mobility. They can practice their professions in other countries, specifically in the United States, where ABET is recognized. It also permits and eases entry to a technical profession through licensure, registration, and certification.

Why is it important for the school to pursue ABET accreditation?

An accreditation proves the commitment of a school to only offer courses of quality and "that their programs are performing at the level required by the professions they serve." It also shows that a school has put in place an education system, the Outcomes-Based Education, meant to ensure that its graduates will be equipped with skills that will help them compete in the global arena.

In the Philippines, how many schools have ABET-accredited programs?

In the Philippines, only Mapúa Institute of Technology has the ABET accreditation for its programs. On top of its three engineering programs that were accredited in 2010, Mapúa's seven other engineering and computing courses were accredited this year.

With a total of 10, this makes Mapúa the only educational institution with the most number of ABET-accredited programs in East Asia.

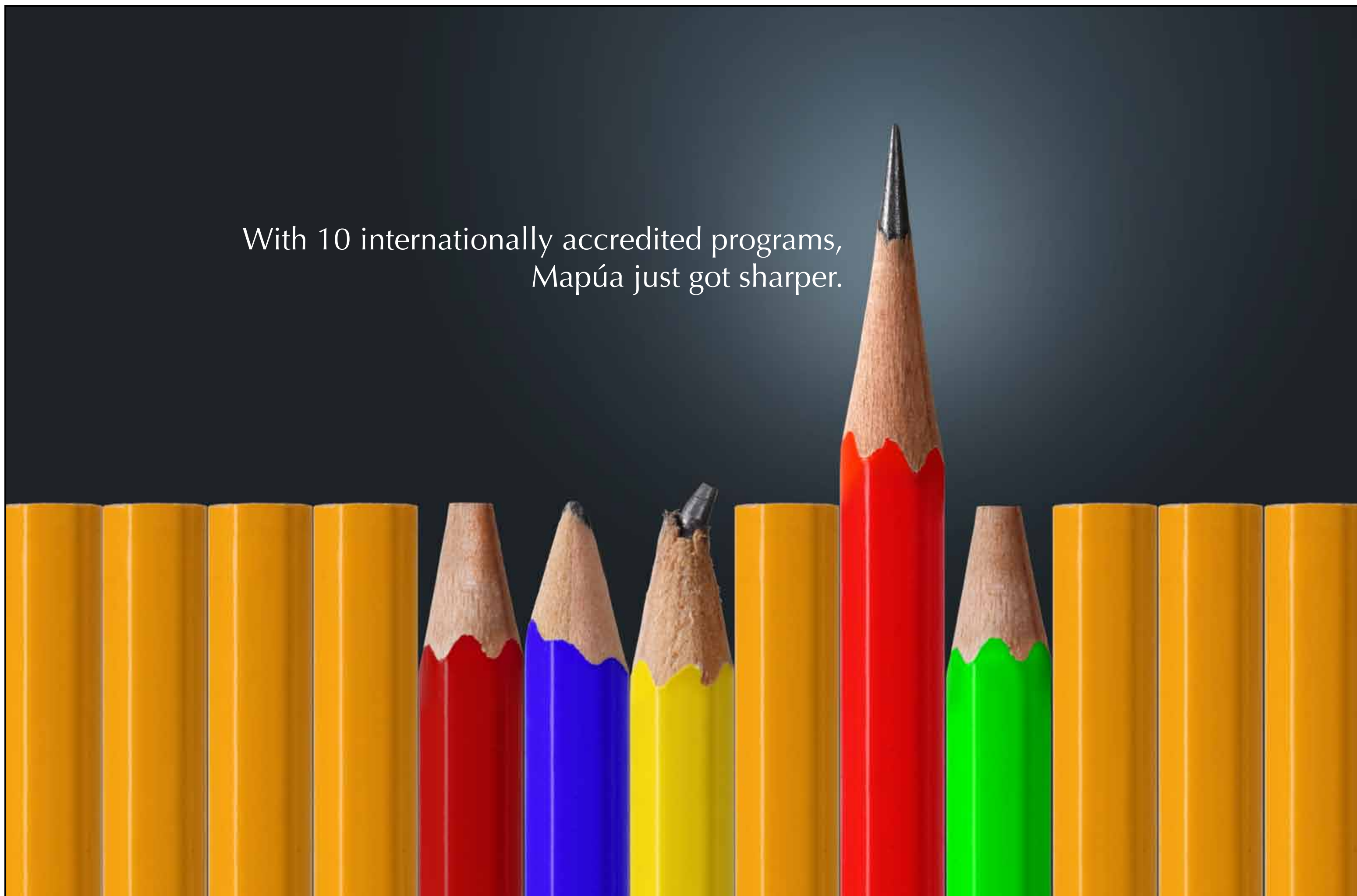
Why did Mapúa pursue ABET accreditation?

This feat was a result of Mapúa's continuing commitment to provide quality education to its students and make them more competitive not just here but also overseas. Pursuing ABET accreditation is also aligned with Mapúa's goal toward becoming a global center of excellence in education.

How does the accreditation process begin?

A school has to apply for an ABET review of its programs. During their evaluation, which usually takes a year and a half, the accreditors check and determine if a program provides and equips students with up-to-date knowledge and skills that meet the needs of the global industries amid rapid technological change. ■

Source: www.abet.org



With 10 internationally accredited programs,
Mapúa just got sharper.

MAPÚA INSTITUTE OF TECHNOLOGY'S ENGINEERING AND I.T. PROGRAMS GIVE YOU THE ABET ADVANTAGE

In this increasingly global marketplace, one must carefully choose the things that could give him a decided advantage. Like a college degree that has gone through international accreditation, enabling him to practice his profession anywhere in the world.

With 10 ABET-accredited programs, Mapúa is the first and only school in the Philippines and in East Asia to achieve this remarkable feat.

The ABET accreditation means adherence to international standards.

Graduates are prepared for entry-level practice, they have the skills employers are looking for: strong technical competence as well as other professional skills – effective communication skills, knowledge of contemporary issues, teamwork, the ability to engage in lifelong learning, among others.

The regular and comprehensive evaluations set by ABET guarantee continuous quality improvement. It is no wonder then that many companies in the US hire only graduates of ABET-accredited programs.

For more information on how you can make ABET your own advantage, contact us: Admissions Office, Mapúa Institute of Technology, Muralla Street, Intramuros, Manila, 1002 Philippines • Tel.: +63 2 524-5570 • Email: admissions@mapua.edu.ph

ABET, the US-based and world-leading accreditator for college and university programs in applied science, computing, engineering and technology, is a federation of 30 professional and technical societies representing these fields.



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Mapúa subsidiaries in sync with its bid for world-class education

Espousing similar core values and offering the same world-class education as those of their parent school, the Malayan Colleges Laguna (MCL) in the town of Cabuyao, Laguna, and the Malayan High School of Science (MHSS) in Pandacan, Manila, both of which are wholly owned subsidiaries of Mapúa Institute of Technology, are ready to take on the world.



Malayan Colleges Laguna in Cabuyao



The Mapúa Institute of Technology campus in Makati



Malayan High School of Science in Pandacan, Manila

MCL and MHSS are now setting a trend of educational excellence in tertiary and secondary levels, respectively, with their advanced facilities, academic programs, and generally high performance standards.

MCL is among the first major institutions to branch out from the National Capital Region and set up campus in the burgeoning Southern Luzon, bringing along its best practices in education management and implementation. Intended to extend the quality of education Mapúa has been known for, MCL has since set its sights on being a center of excellence for science and technology education in the region, with its excellent facilities, technologically advanced and information technology-integrated curricula.

"Maintaining our high standards is intrinsic to our mission of producing the most sought-after graduates by various industries both here and abroad," said MCL executive vice president and chief executive officer Dodjie S. Maestrecampo.

"Many of our systems are definitely advanced," Maestrecampo added. "We want to make sure our students are exposed to all learning resources, and that our systems and our education programs are really current and relevant."

One indicator of success that he takes pride in is the fact that many of the students that do on-the-job trainings in companies in nearby science and industrial parks get positive feedback from their employers. "The companies are very pleased with the performance of our students. Since our programs are really in demand by various industries, and companies are already taking note of the quality of our students, they have high chances of getting hired after they graduate."

With 14 programs, MCL has five degree-offering colleges, namely the Mapúa Institute of Technology, the Mapúa-PTC College of Maritime Education and Training, the E.T. Yuchengco College of Business, the College of Information Technology and the College of Arts and Sciences. Currently, 45 percent of its students are enrolled in engineering programs.

"We graduated the first batch of IT students and so far, based on the initial data, it has been very encouraging. They are now employed in good companies with good starting salaries," Maestrecampo said. "The same goes even for the graduates of our two-year programs and Digital Arts and Design."

The "acid test," however, will come next year when

MCL's first batch of engineering and accountancy graduates take their respective licensure examinations.

"They will graduate in March or April next year. The first batch of licensure examinees will be in October or November. So by that time, we'll have the results," he said. "That's the time we will start to feel the fruits of our efforts. Everyone is waiting for our graduates."

Being a subsidiary of Mapúa, MCL is already one step ahead of other schools in the region. "It's always the brand, the Mapúa brand... Mapúa is known for the quality of its education, as one of the best educational systems in the Philippines," said Maestrecampo, a Mapúa alumnus.

"Maintaining our high standards is intrinsic to our mission of producing the most sought-after graduates by various industries both here and abroad"

"The intention of the school is to provide quality education to the youth, to the students of the south," he said. "You don't need to go to Manila and spend so much money just to get the same quality of education. It's already here, right here complete with facilities, with teachers, plus the environment for learning is really excellent, even better than schools in Manila."

He foresees MCL further expanding by 2014, with other programs being highlighted as well.

Quality Secondary Education

On the other hand, MHSS was built to succeed Mapúa's pre-engineering high school to complement the expansion of the Institute's academic offerings in science and technology and other fields.

It has a top-notch faculty, state-of-the-art facilities, and a curriculum that will allow students to "fully express not only their scientific inclinations but also their artistic bent."

"We established this high school to give an opportunity to Filipino families to have their children, be they inclined towards the sciences or the arts (using various technology-based media), undergo an education of very high standards. We hope it opens many doors for them upon graduation," said Dr. Reynaldo B. Veal, current head of Mapúa and its subsidiaries.

"One of these doors opens to MHSS' mother school, the Mapúa Institute of Technology. For students inclined towards engineering and computing, an MHSS diploma gives them a straight path towards Mapúa programs accredited by the US-based ABET. This will make it easier for them to land jobs, get admitted to graduate school and directly take licensure examinations in the US and elsewhere. Those inclined towards multimedia arts also have a direct path to Mapúa's top-notch program in this area," Dr. Veal added.

MHSS graduates have the privilege to be automatically eligible for entrance to Mapúa, the country's largest engineering school.

Since its foundation, MHSS has already gained recognitions from numerous academic and non-academic events. One major feat was its remarkable performance in the 2010 National Achievement Test (NAT). MHSS was recognized as one of the top-performing schools during the 2010 NAT, ranking 9th, two notches higher than 2009 results, among Manila private high schools.

Recently, MHSS was given free exclusive access to SAS Curriculum Pathways, the web-based, interactive, and standards-based resources in core subjects such as English, Math, Science and History, following the partnership between Mapúa and leading business analytics firm SAS.

"[SAS Curriculum Pathways] offers an alternative mode of engaging the students in the teaching-learning process. On the part of the teachers, it will add to their repertoire of teaching strategies to make teaching-learning more effective. The SAS Curriculum is web-based and interactive, thus, we anticipate that it will generate greater interest among the students in focal subjects. By nature, students love to tinker with the computer and browse the web. In pedagogy, we know that interest in a subject leads to achievement," said of MHSS principal Dr. Efrén B. Mateo.

In line with the school's goal to provide varied fields of interests in its curriculum, MHSS is also one of the few schools in the country that offers Robotics as a subject. Added Dr. Veal: "We wish, too, that our students will grow not only intellectually but also emotionally, socially, morally, spiritually and physically so that they can live life in balance and to the fullest in all respects. Indeed, we realize that high school is a very sensitive and important phase in young lives, and we therefore strive to make our students the center of our small universe." ■

"From consistently producing top-notch engineers and architects, Mapúa Institute of Technology's passion for excellence has brought itself, and the country, to the forefront of technological education race in the world. With ABET accreditation, Mapúa is certified to be a global player."

Mapúa: All leveled up to a global state of play!"

- Dr. Reynaldo B. Veal, President and Chief Executive Officer



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