



Graduate Student Handbook

Master of Science in Technology and Creative Innovation (MSTCI)

Entertainment Innovation Center (EIC)

CMKL University



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Introduction

CMKL University's **Entertainment Innovation Center (EIC)** is the premiere professional graduate program for interactive entertainment as it is applied across a variety of fields. The EIC offers a unique four-semester **Master of Science in Technology and Creative Innovation (MSTCI) degree** focusing on interdisciplinary project work, which covers a range of areas, e.g. spanning learning, health, training, social impact, civics, entertainment, etc, and project teams, which develop games, animation, location-based installations, augmented reality, mobile devices, robotics, interactive performances, transmedia storytelling, etc. This breadth of interests is one of the strongest components of the EIC experience.

The core of the EIC is the **MSTCI degree**. As a professional graduate program, the focus is on our students and providing them with an educational experience that helps their career development through applied research on interdisciplinary projects. Founded in 2019, the EIC's curriculum balances educational goals, professional development, and engaging experiences; or learn, work and play. The heart of the program focuses on communication and collaboration, challenging students to learn about leadership, teamwork, innovation and positive social impact. CMKL is rare among Thai universities in being able to offer this kind of degree, as we are an official partner of Carnegie Mellon University and have access to one of the world's best fine arts and design program, engineering program, and their faculty members and resources.

The “high concept” behind both the center and the master's program is the principle of having interdisciplinary groups work together on projects to **produce artifacts that are intended to entertain, inform, inspire, or otherwise impact an audience/guest/player/participant. The master's degree is focused on project courses because the larger challenge students face in authoring interactive media is bringing together different disciplines.** The MSTCI degree program is driven by the goal of devising a way to do this as effectively as possible through a research and development agenda that illustrates the range of expertise and experience of the EIC. Projects and courses explore **transformational games, interactive storytelling, innovation by design, and learning and media.** The emphasis is on leadership, innovation, and communication by creating challenging experiences through which students learn how to collaborate, experiment, and iterate solutions.

The EIC does not intend to take artists and turn them into engineers, nor vice-versa. While some students will be able to achieve mastery in multiple areas, it is not our intention to have students master “the other side” or “all sides.” Instead, it is the intent for a typical student in this program to enter with mastery/training in a specific area and spend their four semesters at the EIC learning the vocabulary, values, and working patterns of the other culture. This learning will be evidenced by their ability to work effectively with those from different and various backgrounds and expertise.

EIC Mission Statement

Providing leadership in education and applied research that combines technology and art, to explore learning, storytelling, innovation and entertainment, and to create experiences that educate, engage and inspire.

While this handbook is specific to your academic experience in the department, there are several other resources graduate students are encouraged to consult during their tenure at the EIC. Further details can be found in Appendix A of this handbook.

EIC Code

Students at the EIC, because they are members of an academic community dedicated to the achievement of excellence, are expected to meet the highest standards of personal, ethical and moral conduct possible.

These standards require personal integrity, a commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations once undertaken must be met, commitments kept.

As members of the EIC community, individuals are expected to uphold the standards of the community in addition to holding others accountable for said standards. It is rare that the life of a student in an academic community can be so private that it will not affect the community as a whole or that the above standards do not apply.

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed

without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

The commitment of its faculty, staff and students to these standards contributes to the high respect in which the MSTCI degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily withdraw from the center.

The EIC Code can also be found online at: <http://eic.cmkl.ac.th>

EIC Contacts

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Nattakan Jiarakul — Faculty — nattakan@cmkl.ac.th

Kamin Phakdurong — Faculty — kamin@cmkl.ac.th

A full listing of EIC faculty and staff can be found on the website: <http://eic.cmkl.ac.th>

EIC Program Committee

Natasha Patamapongs Program Chair

Nattakan Jiarakul Program Committee

Kamin Phakdurong Program Committee

Dan Martin Advisor
Dean, College of Fine Arts Carnegie Mellon University

Daniel Green Advisor
Program Director, Master of Entertainment Industry Management at Carnegie Mellon University

EIC Program Faculty Member

Natasha Patamapongs Master of Entertainment Industry Management
Carnegie Mellon University

Nattakan Jiarakul	Master of Law New York University
Kamin Phakdurong	Master of Science in Integrated Design and Management Massachusetts Institute of Technology
Supan Tungjitkusolmun	Ph.D. Electrical Engineering University of Wisconsin
Akkarit Sangpetch	Ph.D. Electrical and Computer Engineering Carnegie Mellon University
Orathai Sangpetch	Ph.D. Electrical and Computer Engineering Carnegie Mellon University

Enrollment

Registration Procedures

Registration is handled through the EIC official website. Students are responsible for enrolling themselves in required courses and electives.

The first step in the registration process is to review the appropriate EIC curriculum in this handbook. If there is room for an elective in the semester for which the student wishes to register, she or he must confer with (the) a Committee Member to determine an appropriate course. The Committee Member will grant exceptions to the curriculum only after consultation with the Director.

Full Time Status

At CMKL University a minimum of 36 units per semester is required for full time status. All international students are required to be full time students. A student's schedule is considered over-loaded when it exceeds 50 units per semester. During the first semester, EIC students take 54 units. After this, students must receive approval for a course overload from the Director.

Qualifying Examinations and Thesis

There are no qualifying examinations or master's thesis required for the MSTCI degree.

Orientation

At the start of each academic year, the EIC hosts an orientation session for new students in the week prior to the start of classes and then an update orientation for 2nd year students during the 1st week of the semester.

Curriculum and Graduation Requirements

Because the EIC's curriculum is both specific and chronologically tight, students may only begin work towards their MSTCI degree through the first semester courses. All students have to start with the first semester curriculum.

Academic Advising

The EIC is a four-semester professional graduate program with defined curriculum choices and no thesis. To that end, the role of academic advisor is a limited one. While the Program Director must approve all matters dealing with the academic program, students should feel free to seek academic guidance from any member of the EIC faculty.

Students are also assigned EIC Faculty Mentors. Mentors work with students to provide general advice on their educational goals and professional development. Working with the Director of Student Services and the Program Director, they help advise students on types of projects, roles to consider and elective options. Mentors meet with students to discuss current semester experience and next semester plans. Mentors work to get to know students' goals and expectations to help make informed decisions when the faculty forms project teams.

Students should feel free to meet with any of the faculty and staff to ask questions and discuss academic and non-academic issues as well. The faculty and staff can help refer a student to department, university or community resources whenever necessary.

Curriculum Requirements

	Standard EIC Curriculum	
Semester 1	Fundamentals of the EIC	9 units
	Improvisational Acting	9 units
	Visual Storytelling	12 units
	Building Virtual Worlds	24 units
Semester 2	Interdisciplinary Project I	36 units

	1-2 Elective(s)*	6-12 units
Semester 3	Interdisciplinary Project II	36 units
	1-2 Elective(s)*	6-12 units
Semester 4	Interdisciplinary Project III	36 units
	1-2 Elective(s)*	6-12 units

*All Elective choices must be reviewed with the Director of Student Services.

There are two variations to the standard curriculum requirements:

- Integrated Co-Op: during semester 3 or 4 students can apply for a semester of academic co-op with a company (further requirements below).
- Student-Defined Semester: after the first semester of study, students can apply for a student-defined semester (further requirements below).

Note: Students can do either a co-op or a student-defined semester, but they cannot do both.

Graduation Requirements

It is ultimately the responsibility of the students to ensure that all courses necessary for graduation have been successfully completed. Faculty and staff are available to assist students, and the Director of Student Services will attempt to advise students individually each semester, but only students can be held responsible for their failure to complete graduation requirements.

In order to graduate from the EIC, students must complete with passing grades all their semesters of study and **at least 2 Interdisciplinary Projects**. (Note: the summer break does not count as a full semester.) Failure to meet the requirements of each semester will result in the appropriate academic action. Failure to meet the final semester requirements prevents a student from receiving their diploma during commencement ceremonies, and may prevent a student from graduating on time at all.

While the EIC curriculum is subject to change, the curriculum in effect at the time of a student's matriculation will be the one that dictates their graduation requirements. Exception to this policy will be at the discretion of the Director.

Academic Requirements

Students will need to pass two to three project courses, two to six elective courses, or also the co-op course, following the academic requirements below in order to graduate.

Overall Grade Requirements:

- A. Maintain an overall GPA of 3.0 or above each semester in order to stay in good academic standing
- B. Final GPA of 3.0 is required to graduate

Grades

The EIC follows CMKL policy in giving letter grades for all courses. Graduate students at CMKL are graded on a letter grade system, optionally augmented by a plus or minus as appropriate. The letter grades at the EIC are representative of the following:

- A – Excellent work that exceeds expectations
- B – Acceptable work for an EIC student
- C – Unacceptable work for an EIC student
- F – Egregiously unacceptable work

EIC Core Course units with a grade of C+ or lower are not acceptable toward MSTCI degree requirements. Elective courses with a grade of C- or lower are not acceptable toward MSTCI degree requirements.

University Policy on Grades

University grading policy: <http://eic.cmkl.ac.th>

This policy offers details concerning University grading policies for students taking courses and covers the specifics of assigning and changing grades, grading options, drop/withdrawals and course repeats. It also defines the undergraduate and graduate grading standards.

Total Number of Units Required for Degree Attainment

- Standard Curriculum: 186 - 198
- Integrated Co-Op: 180 - 198
- Student-Defined Semester: 180 - 198

First Semester Courses

All EIC students have to successfully pass all the first semester courses with a grade of B, 3.0, or higher. An EIC student who makes below a B in any of the first semester courses will be placed on academic probation for the following semester. An EIC student who makes below a B in two or more of the first semester courses will not be eligible for study in the program the following Spring semester and will be suspended until the following Fall semester. The student will have to wait until the following Fall semester to petition to remain in the program (following the appeal process below) and retake the failed first semester courses in order to matriculate into their next semester of study in the program.

Core Courses

All core courses listed below must be passed with a grade of B, 3.0, or higher to remain in good academic standing. If a student makes below a B- in a core course after their first semester they will be placed on academic leave for a semester, and they will have to take the course again upon return to the program. A student who earns a B- or lower on more than one core course (even if the multiple courses all occur within their first semester) must petition to remain in the program (following the appeal process below).

See list of Core Courses on Appendix A

Project Courses

Projects courses must be passed with a minimum grade of B to remain in good academic standing. If a student earns below a B for a second time in a project course during their final semester of study, they have to petition in order to graduate (following the appeal process below). It is not possible to take more than one project course in a semester. So, having to retake a failed project course will require staying more than four semesters in the program. All students must have one project semester in Bangkok, Thailand.

Elective Courses

If a grade of C- or lower is earned, that course cannot be counted towards the degree and the student must either retake the course and earn a B- or better, or take another course in its place.

If a student gets a C- or lower on two electives, they will have to seek approval for a student-defined semester, or they will be required to stay more than four semesters in the program in order to pass all the courses needed to graduate. NOTE: International students will not be able to extend their stay due to failing courses.

See list of Elective Courses on Appendix B

Semester Performance Review

The EIC evaluates students above and beyond the normal grading procedures. During and after the First Semester Courses, the faculty meets as a whole to review each student's overall performance for their first semester. This assessment is led by faculty members who teach the First Semester Courses, but all faculty participate. If the

faculty determines that a student's performance is not satisfactory, the student will be placed on performance review and will meet with the Director to discuss the perceived issues with their performance and recommendations for corrective action will be made.

This is not a grading evaluation, but is instead a performance review used to assess the well-being of the student during their first semester at the EIC. The overall goal of this assessment is to identify any individuals who may need additional advising in terms of how to best succeed in their studies. Students who are placed on performance review twice during their first semester will be placed on academic probation.

This process is then repeated both during, and at the end, of the second semester. Students who are placed on performance review at all four reviews in both the first and second semesters will have to petition to remain in the program (following the appeal process below).

This individual assessment is not directly related solely to a student's grades, though it could be. It is possible however that a student could pass his or her courses or projects, but still be assessed as needing further advising regarding corrective action in their performance.

This performance assessment is a subjective process based on the faculty's shared perceptions of a student's performance. It is meant to provide students with essential feedback and to provide an opportunity for improvement. This review process is intended to help students succeed at the EIC.

Academic Continuation

Good Standing:

A student is in good standing if they have made a B, 3.0, or higher on their Core Courses, maintain an overall GPA of 3.0 or higher, have not been placed on performance review twice in one semester, and are making good progress towards their degree as evidenced by meeting the academic and community expectations of the program.

Not in Good Standing:

A student is not in good standing if they have made a B- or lower on any of their Core Courses, had their overall GPA below a 3.0, failed an elective, or been placed on performance review twice in one semester. Students not-in-good standing are placed on academic probation for the following semester.

Any students on academic probation must maintain a B or above in all their courses, have an overall GPA of 3.0 or above, and not be placed on performance review twice that semester. Students who maintain these minimum grade and performance requirements are released from probation.

Students who cannot maintain these minimum grade and performance requirements will be dropped from the program.

Students on academic probation the final semester of study in the program can only graduate if they meet the graduation requirements of having a GPA of at least 3.0.

A student must petition, following the appeal process below, to remain in the program if:

- they make a B- or lower on more than two core courses (even if the multiple courses all occur within their first semester),
- their GPA is below a 3.0 for two semesters, or
- they were placed on performance review four times during their first year of study.

If reinstated, students will return on academic probation.

EIC Academic Policies

Academic Integrity

In the midst of self-exploration, the high demands of a challenging academic environment can create situations where some students have difficulty exercising good judgment. Academic challenges can provide many opportunities for high standards to evolve if students actively reflect on these challenges and if the community supports discussions to aid in this process. It is the responsibility of the entire community to establish and maintain the integrity of our university.

Critique

Throughout the course of a student's study, the EIC provides both project and personal critiques of academic work. This is a process of critical thinking and constructive criticism aimed to offer both positive and negative feedback in an insightful and supportive context.

During critiques, faculty will focus on the positive aspects of the work as well as comment on what improvements could be made and why. Critique of a project focuses on the work and not on the students involved. Critique of students focuses on their performance and not on them as individuals.

As recipients of critique, students are encouraged to focus on the constructive elements of the feedback with an open attitude. Critiques are opportunities to learn and understand how to best improve their performance and their work.

Incomplete

The EIC does not grant "Incomplete". The only exceptions are for instances when serious, extenuating circumstances prevent a student from completing assigned work for a class. These circumstances include, but are not limited to: personal illness (physical or mental), family distress, or some other major obstacle to successful completion of coursework. An "Incomplete" grade is granted exclusively at the discretion of the course instructor. Once the decision has been made to grant a grade of incomplete, it is the student's responsibility to arrange a deadline for work completion with the instructor. EIC policy dictates that any incomplete grade will automatically be changed to a failing grade by the end of the following semester if the coursework is not completed.

Time Off and Leave of Absence

EIC students are expected to attend all classes and participate in all program activities throughout the four semesters in which they participate. This excludes any defined academic break periods, and the official EIC holidays as listed below.

EIC Holidays:

- New Year's Day
- Makha Bucha Day
- Chakri Memorial Day
- Songkran Festival
- National Labour Day
- Wisakha Bucha Day
- H.M. Queen Suthida Bajrasudhabimalalakshana's Birthday
- Asarnha Bucha Day
- H.M. King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua's Birthday
- H.M. Queen Sirikit The Queen Mother's Birthday
- H.M. King Bhumibol Adulyadej The Great Memorial Day
- Chulalongkorn Memorial Day
- H.M. King Bhumibol Adulyadej The Great's Birthday / National Day / Father's Day
- Constitution Day
- New Year's Eve
- New Year's Day

For the most up-to-date University calendar, please refer to <http://eic.cmkl.ac.th>

A student who withdraws or takes a leave of absence from the University at any time, up to and including the last day of classes and excluding the final examination period, does so with the understanding that no grades will be recorded for that semester. In some cases the student's department may choose to state the time at which, or the conditions under which, the student may be permitted to return. Withdrawal or voluntary leave of absence requires that a student file a Withdrawal/Leave of Absence form with the HUB, after securing the appropriate signature approvals. Return from withdrawal or voluntary leave of absence requires department's approval through a Request for Return from Leave of Absence form.

EIC students should keep in mind the following if they are considering a withdrawal/leave of absence:

- Students are encouraged to take a leave of absence if they feel they need to take a break from the intense educational experiences during their graduate studies.
- Our curriculum focus on teamwork is such that students who take more than two semesters away from the EIC will be required to reapply to the program.
- Students in good standing in all courses, and on no academic action when taking the leave, will be reinstated into the EIC at the level they were about to take upon requesting the leave.
- Students in poor standing or on academic action who request a leave will be required to be re-interviewed when the leave is up before being permitted to re-enter the school.
- Students who, due to illness or personal problems, take a leave of absence during the semester will be discussed on an individual basis. If the amount of time absent affects academic performance, a student may be asked to repeat the incomplete semester's study. If their academic progress remains excellent, students will be allowed to return and complete the semester.
- International students should consult with the Office of International Education regarding the visa status implications of taking a leave of absence.

Attendance and Tardiness

The program will require attendance at various seminars, meetings, lectures, presentations, and demonstrations. These events will be announced in advance as mandatory meetings. Exceptions to this policy are at the sole discretion of the Director. Punctuality is expected. If students must be late or absent for any reason, please contact the Director in advance to discuss their personal situation, and a reasonable solution will be discussed. After two unexcused absences, each additional unexcused absence will reduce the student's grade in that semester's project course by 1/3 of a letter grade.

Note: all individual courses have their own attendance policies that will be stated in their syllabi.

Independent Study

For EIC students

Independent study is available for students who are in good academic standing. Independent study allows the student, with the support of faculty, to develop a self-generated project or body of work outside the classroom or project course setting. In order to register for an independent study, the student must first propose their idea to a faculty member (who does not have to be from our department) who agrees to oversee their project, and finally fill out the appropriate paperwork available from the Director of Student Services.

For non-EIC students

Students outside the department will sometimes have an opportunity to become supporting team members of an EIC project by registering for EIC independent study units. At the beginning of each semester, the EIC may hold an “open call” for interested students, where the projects for the current semester will be explained. Students will then have an opportunity to “audition” for the project team-members and/or project course instructor(s) (auditioning includes, but is not limited to: sharing or creating code samples, writing samples, portfolio excerpts, etc.) Students selected to become a supporting project team member will be asked to sign an agreement detailing what their contributions will be to the project, and describing grading criteria.

Field Research

The EIC has found that among the most important steps in the educational process are hands-on learning, interacting with industry professionals, and behind-the-scenes tours. The EIC provides experiences that cannot be read about, but require and build from firsthand student participation.

To that end, EIC students and project teams spend time in the program traveling locally and nationally to visit venues, attend conferences and trade shows, and to participate in workshops. Our students attend plays, gallery exhibits and conferences, and visit relevant companies, venues and clients during the academic year.

Our visits usually include behind-the-scenes access for our students. EIC first year students participate in extended field trips for an insider's look at the creative innovation industry. It is this access that makes our program unique.

NOTE: All field research experiences must be approved by the Project Team EIC project course instructor(s) and the Director. Field research is not an entitlement but an important educational opportunity.

Outside Work

Due to the time commitment necessary to complete the program, the EIC does not allow students to work outside the department for more than 10 hours per week. If outside employment of more than 10 hours per week is desired, the student must obtain written permission from the Director and Director of Student Services. Once approved, students must notify their project course instructors and faculty mentors. Outside employment of any kind does not constitute an excused absence from EIC classes, or from the completion of any project assignments. International students will be required to apply for work permit through the Office of International Education at CMKL University. Note: students who are receiving a financial stipend to be a graduate assistant cannot also work outside of the department during the same semester.

Intellectual Property

The Intellectual Property rights of EIC, as it relates to coursework, is very straightforward: students own all works created for a registered EIC course for which tuition has been paid and no internal or external sponsored research funds are used.

As coursework, however, the fruits of this labor can be shown publicly via presentations, demonstrations, and on websites of CMKL University or EIC without the written permission of the student. In certain instances, however, companies will want EIC students to work on and/or review software or other products under NDAs or some other agreements. These are defined below:

Non-Disclosure Agreement (NDA)

NDAs are Non-Disclosure Agreements. They are designed to safeguard the intellectual property of a company by having individuals sign a legally binding document wherein the individual agrees not to disclose what he or she has seen, observed, or worked on, to a competing company. The intent of the NDA in fact, is to essentially swear the individual to secrecy, though they are entered into in good faith. It is very rare that the legal impact of NDAs is an issue unless an individual willfully violates the terms of the NDA and intends to compromise the competitive advantage of one company by

divulging secrets to a competitor. That said, companies requiring NDAs take the exercise seriously. There has been significant friction generated between companies and students over perceived violation of NDA principles.

Grant of Rights and Licenses Student Form

Instances will arise wherein EIC students are given the opportunity to work with dynamic, potentially revolutionary technology which may indeed have a tremendous impact on the industry. The benefit here is in students being able to work on the next generation of creative technology, in having a company become familiar with their talent, dedication, and work ethic for the purposes of offering students a summer internship and/or employment, and for enhanced resume and portfolio purposes. It is often the case that even in instances where a Grant of Rights and Licenses Student Form is signed, the student is able to reference the work done and often include a demonstration of the work for the purpose of portfolio review.

Internships and Co-op Requirements

Eligibility

Students in good academic standing are eligible to request a co-op for one semester of study during the 2nd year with the EIC (for their 3rd or 4th semester, but not both). An EIC co-op requires the approval of the Director.

Eligibility for a co-op for the coming fall semester is determined by the core course grades and GPA at the end of the previous spring semester. Eligibility for a co-op for the spring semester is determined by the core course grades and GPA at midterm of the previous fall semester.

Co-op Process

Students need to send requests to the Director along with a job description and copy of the official offer letter from their prospective employer. Such requests must be submitted by at least 60 days prior to the start of the semester in which a co-op is requested (exact dates will be shared each semester). Decisions will be made based on the faculty's academic and performance evaluations of the student to date and the assessment of the best learning opportunity for the student.

If approved, students will enroll in the EIC co-op course (36 units) for the coming semester.

If denied, students will receive written feedback from the faculty stating reasons for the denial. Denied students can appeal to the Director (following the appeal process).

Students on a co-op semester have the elective requirement waived, but they can explore the possibility of taking one elective (9-12 units) with the approval of their supervisor at the company with which they have a co-op, as well as the EIC Director.

Criteria for a co-op include:

- 15 weeks in length in the fall and spring with a start and end date that mirrors the academic calendar
- full time employment (37.5 - 40 hours per week)
- paid (unpaid can be considered provided the work does not violate the labor law and is a highly valuable learning experience for the student)
- at the employer's location, not remote work
- work that is fitting Master's students studying creative technology

Students cannot do a co-op at a company in which another student has a supervisory or financial role.

While the EIC faculty and Director of Career Services will assist students in their efforts to obtain a co-op, and while the EIC may develop relationships with some companies to help place students in co-ops, obtaining a co-op is the responsibility of the student.

Elective Requirements

Every student beyond their first semester is required to take one elective (6-12 units) each semester they are taking a project course. In general, during a project course semester, a student can only take one elective with no additional audits, i.e., just one elective course (or multiple mini courses, but no more than 12 units total).

Students on a **co-op semester** have their elective requirement waived, but they can explore the possibility of taking one elective (9-12 units) with the approval of their

supervisor at the company with which they have a co-op, as well as the EIC Director. As on a project semester, students on a co-op can only take one elective, no additional audits, just one elective course.

Students who are approved to take a **student-defined semester** have to follow the established guidelines of four courses that semester, with one possible audit (with permission from the course instructor).

Depending on which of the four ways students are taking through the program (standard or one of the three variations listed above), they have to successfully complete two to six electives during studies at EIC.

Students in good academic standing are eligible to request a student-defined semester for one semester of study for their final 3 semesters of study. During this semester students are required to take and pass four courses (with at least 36 units total) and they can also choose to audit one more course. Students have to make a B or higher in at least three of the four courses during a student-defined semester.

Good academic standing eligibility for the fall semester is determined by the core course grades and GPA at the end of the previous spring semester. Good academic standing eligibility for the spring semester is determined by the core course grades and GPA at midterm of the previous fall semester.

Student-Defined Semester Process

Students need to develop an academic plan for this student-defined semester of study connecting the types of courses they hope to take to their professional development goals. They will submit this academic plan to their faculty mentor by the end of November (exact dates will be shared each semester), who will then share it with the rest of the faculty for approval. Decisions will be made based on the faculty's academic evaluation of the student's performance to date and the assessment of the best learning opportunity for the student in relation to the opportunities on well balanced project teams that upcoming semester as well. If approved, students will enroll in four courses for the coming semester. If denied, students will receive written feedback from the faculty stating reasons for the denial. Denied students can appeal to the Director (following the appeal process).

Graduate Assistant Requirements

After their first semester, students can apply for Graduate Assistant (GA) positions. Most GAs are related to EIC courses where students need to be approved by the instructor of the course. There are also some departmental GA positions related to the library, labs and workshops around the EIC, where students will need to be approved by the faculty or staff member in charge of the position. Emails will be sent out each semester about GA opportunities for the following semester, but it is the responsibility of the students to apply. Note: EIC courses only have a GA if there are 20 (or more) students enrolled in the course.

If accepted as a Graduate Assistant for an EIC course, students can opt for a financial stipend, or can opt to do this for course credit. Either way, they can also take an elective course during a project or co-op semester, or four other electives during a student-defined semester.

EIC Graduate Concentration Requirements

EIC students can take specific sets of courses to graduate with a Master of Science in Technology and Creative Innovation degree with a concentration in a distinct area. While not a direct part of the degree, these concentrations enable students to focus their electives. In order to earn a concentration, students have to take three courses within the stated concentration, and make a B+ or above in each course. Students should work with their faculty mentors to plan out the courses that best line up with their professional development goals. Students are only eligible to focus on one concentration.

The list of all approved courses for the concentrations will be kept up to date each academic year.

Appeal Process

Final Grade Appeal

As per EIC policy, a graduate student who believes a final grade assigned for a course is based upon a manifest error (e.g. clear error such as arithmetic error in computing a grade) or the faculty or staff member who assigned the grade did so in violation of a

EIC policy should first present the case informally to the faculty or staff member responsible for the course in which the student believes an inappropriate grade has been awarded. If the student is not satisfied with the resolution at this first step, the student shall submit a formal, written appeal, with appropriate documentation, within the first fourteen (14) days of the semester following the awarding of the final grade under challenge, to the head of the department in which the course was offered. The department head will issue a written decision on the appeal within 30 days, or as soon thereafter as practical. If the student is not satisfied with the decision of the department head (or program head), the student may submit a formal, written appeal, with appropriate documentation, within seven (7) days to the Dean of the College in which the course is offered. The Dean shall render a decision within 30 days, or as soon thereafter as practical. The decision of the Dean shall be final and not appealable.

Co-op and Student-Defined Semester Appeal

Students who are denied their request for a co-op or a Student-Defined Semester should submit a formal, written appeal, with appropriate documentation, to the EIC Director. The Director will issue a written decision on the appeal within seven (7) days, or as soon thereafter as practical. The decision of the Director shall be final and not appealable.

Publishing Papers

Although the EIC is more about “making things” than about “publishing papers,” for some projects, publication is an appropriate way to share lessons learned with colleagues. Publication can leave an archival record of the project work that can live much longer than the project artifact itself. Since publication is a process where experience matters, EIC students should work closely with their project course instructors when publishing. One model for authorship is that if an individual student takes on the bulk of the work of writing the paper, she or he should be the first author listed. Based on the traditional convention, it is customary for the project course instructor(s) to be listed last (this is sometimes known in academic culture as “senior author”), unless the project course instructor actually writes the paper. Barring unusual circumstances, all other student members on a project should be listed as authors on an EIC produced paper, in alphabetical order, to reflect their contribution to the project.

All EIC project teams will be required to write post-mortems as part of their archival materials.

Instruction and Communication

All EIC instruction is offered, and all student assignments are submitted, in English. As such, all EIC students are required to use English in their academic work and meetings in order to most effectively communicate with their teams.

Career Services Code of Ethics

The EIC provides career service support and professional development advice, but it is ultimately the responsibility of students to apply and interview for opportunities while conducting themselves in a professional manner. This Code of Ethics applies to students searching for employment (internship, co-op and full time) as conducted through EIC. By adhering to this code, students will project a positive image of themselves, their class, EIC, and CMKL University.

If students plan to utilize Career Services or any of its resources, follow this code and sign this handbook, indicating an understanding and willingness to abide by its tenets. Due to the potential harm that the violation of this Code of Ethics could cause to other students and important employer relationships, students should understand that violations can result in severe sanctions (e.g., termination of some or all career services, referral to the Director of Career Services or referral to the Director).

Present qualifications and interests accurately

Falsifying data, such as GPA, date of graduation, degrees obtained, institutions attended, prior work experience and eligibility to work in Thailand is unethical and is grounds for immediate dismissal with most employing organizations.

Learn about the employers and their positions

Employers expect that candidates will make an effort to learn about their companies. Failure to do so indicates a lack of interest and reflects poorly on the candidate and the school.

Interview only when genuinely interested in the advertised positions

Do not interview for practice. This will cause the recruiter to feel his or her time is being wasted and takes away valuable interview time from fellow students who may have a

sincere interest in the organization. If students are concerned about their interviewing skills, mock interviews are available. When signing up to attend an employer sponsored event/information session or Career Services event it is expected that students will be on time and remain until the conclusion of the event.

Participate in the interview

Employers take the interview process seriously and expect students to honor their agreement to arrive on time and participate in the interview. Not showing or canceling late (defined as canceling less than 24 hours before an interview, or 72 hours if the interview is scheduled on a Monday) reflects poorly on the candidate and EIC.

Notify organizations of a student's acceptance or rejection of offers as soon as that decision is made and no later than the deadline prescribed by the employer.

Candidates should expect offers to be confirmed in writing, and likewise, should notify the company of accepted or rejected offers by telephone first, followed-up with a letter or email. Requests for extensions of decision deadlines should be made as early as possible, not at the last minute.

Honor an accepted offer as a contractual agreement

Upon accepting a position, candidates should withdraw from interviewing and notify Career Services of a decision. Continuing to interview after accepting an offer or renegeing on an accepted offer is considered unethical.

Be fully engaged when attending events such as information sessions, workshops and site visits.

RSVPs are required for many events. Students should RSVP for the events they are attending then honor that RSVP by coming to the event. If students can no longer attend the event, they need to cancel their RSVP.

Be on-time and stay for the duration of the event. If students need to leave early, let the employer or Career Service professional know.

Turn off cell phones and close laptops.

Students should give their full attention to the presenter.

EIC Project and Group Policies

Professional Standards

As a member of the EIC, and as a member of a project group, students should consider themselves a professional representing our department, our school, and themselves. Please behave as a professional, especially when meeting with clients. For client meetings and when making departmental presentations, business casual dress is expected. Students should ask the faculty or Director of Career Services to define business casual if they are unsure what this means. Always remember that punctuality is essential.

EIC Project Process

The central part of the EIC curriculum is the project course. The EIC regularly surveys the student body in order to get regular student input on project interests as related to career goals, to help shape the types of projects offered for the upcoming semesters. Students are asked about their preferred role(s) based on their expertise and experience and the type(s) of project based on interests. The faculty and staff work to offer projects that resonate with the interests expressed through the student surveys. Faculty will work to get students their role on the type of project in which they're interested.

Note: Projects can generate high interest from students for the specific project team roles. As such, student apply with resumes and portfolios to help select well-balanced teams.

EIC Project Course Structure

In the project course students are in small, interdisciplinary teams, creating artifacts under direct faculty supervision. An artifact may be a website, a piece of software, a piece of hardware, a design document, or a number of other things. Artifacts are typically intended to be working prototypes or playable proofs of concept, not production models. Each project team, working with guidance from their project course instructor(s), must design what they are going to create, the mechanisms by which they will create it, and then actually create it.

EIC Projects occur in 3 ways:

1. **Client Sponsored** – in which an external group supports a project on which an EIC team will work.

2. **EIC Research** – in which a faculty member has a research idea on which an EIC team can work.
3. **Student Pitch** – in which a group of students go through the EIC pitch process and get approved.

The structure of the project course is intended to balance several issues:

1. The creation of an environment where all students can receive individual guidance and feedback on how they are doing, in the context of a group project where the group succeeding is a paramount value.
2. The focus on process (learning how to work effectively), product (successfully creating an artifact/prototype) and production (the team deliverables throughout the semester.)

A Project Course syllabus will be shared with all EIC students during their semesters of study at the EIC. For many students, this kind of project course may be a new experience; so please feel free to ask questions of project course instructor(s), any other EIC faculty members, or the Director at any time. The goal is to help all the EIC students learn how to do this kind of interdisciplinary work effectively and professionally.

Year-Long Projects

The EIC offers year-long projects for students to consider across the final three semesters of the course of their study. This enables larger-scale studio projects that engage professional pipeline strategies from ideation to completion. The EIC faculty works to balance teams across both semesters, as well as for continuity of the project. If a project is not meeting expectations in the fall semester, it may be decided to not continue it into the spring.

Project Purchasing

EIC projects will periodically need additional software, props, and other material requiring purchase from outside companies ranging from standard retail outlets to online vendors. Still, the presumption is that EIC projects do not have intrinsic budgets, but rather the needs of the project will drive and justify the purchase of goods and services. As a general rule of thumb, requests that are made with reasonable lead time, and requests for equipment that is likely to also be useful in other current or future EIC projects, are mostly likely to be approved.

A request to purchase goods and/or services for an EIC project should be made directly through the project course instructor(s) of the specified EIC project. If there is a serious time constraint involved, petition can be made directly to the Director. All purchase requests for EIC project course material must check with the Facilities Coordinator to see if EIC already has the item(s), and all requests must be authorized by the Director through written confirmation. Purchases made by students that are not approved prior will not be reimbursed, even if a student feels certain that it will be approved after the fact.

EIC Communication Policies

Email Policy

The culture of the EIC relies heavily on email and mailing list communication. Official communications are often made only through email.

Students are required to check email at least once every 24 hours. 24 hours after an email is sent, students are responsible for having read and understood it (including weekends). Forwarding problems and spam filtering false-positives cannot be used as excuses.

Official emails are sent to students' CMKL email addresses. If students are using a different email address, they are obligated to either check both accounts, or set up forwarding from their CMKL address to that address.

Mailing Lists

There are many mailing lists used by EIC, including ones for each class of students, faculty and staff, each class taught, and each project. Membership of some lists is mandatory; for others it is optional.

Department Resources

Listed below are EIC policies on the use and distribution of resources within the department. All of the policies are designed with a few key ideas in mind:

1. The EIC faculty and staff make the decisions on how resources are distributed.

2. Decisions are based around the needs of a project, or in some cases a course, not personal needs.
3. Mutual respect, personal responsibility, teamwork, and effective sharing.

Computers

The computing environment at the EIC is unique and its design is always being re-evaluated based on the needs of the ever-changing industry in which the EIC educates students to thrive.

All of the policies and guidelines set forth by CMKL apply here at the EIC. In addition to those rules, the EIC has its own policies and guidelines, none of which supersede CMKL's guidelines. Please refer to the following URL for relevant policies and guidelines: <http://eic.cmkl.ac.th>. Students are responsible for following the policies and guidelines of both the EIC and CMKL.

Each student will be assigned a computer pre-loaded with all the software needed for the course and project work assigned here. The computer belongs to the EIC, but will be considered a student's personal space during the duration of their study here, subject to all University policies governing the use of computer equipment. Proper use of the desktop computer is the student's responsibility.

EIC students are given Administrator Rights to their computers and are free to install software, or make configuration changes, that they feel are necessary to complete their project and course work. However, because of this privilege, a student also has the ability to "un-do" configurations (such as un-installing programs, disabling the local firewall, or removing the anti-virus application) that can negatively impact the intended function of the computer. As such, the overall security and health of a student's computer ultimately is that student's responsibility. The EIC technical staff is here to help with anything that goes wrong, but the staff can't be held responsible for any problems that may result from the abuse or neglect of the computer.

Support is only provided for computers that the EIC owns and maintains. The EIC cannot provide support for computers that students own, such as personal laptops, even if the student chooses to use it for their coursework or project work here. This includes floating and cloud-based software, such as Adobe CC, as official support is tied to the hardware upon which the supported software runs.

Software

In addition to the software pre-loaded on each student's machine, software is available on the main file server. Most of this software is free and/or open-source and as such, it does not need to be licensed to install and use.

Most of the licensed software is there as well, but is only to be used in cases of re-install or re-configuration, and is not to be installed on machines that the EIC does not own. Sometimes there are upgrades to newer versions of pre-loaded software available, and when deemed necessary, it will be upgraded over the network by the EIC system administrators automatically. In some cases, students may be emailed instructions on how to perform the upgrade with assistance from the EIC technical staff.

Printing

There are communal, monochrome network printers located in the office. In general, use of the printers is for project and academic needs only. Color printing is reserved for official project, class, and internal needs and access for color printing must be requested. As each color printer resides in a staff or faculty office, students must plan ahead for requests, as access will only be granted during normal business hours.

For a list of the shared printers, their locations, capabilities and restrictions, look here: <http://eic.cmkl.ac.th>

Servers

There are four types of servers at the EIC:

1. Class I - Production Servers for General Infrastructure
2. Class II - Production Servers for Projects
3. Class III - Non-production Servers for Projects
4. Class IV - Testing Servers

For a list of EIC servers and their services, look here: <http://eic.cmkl.ac.th>

It's common for a project team to require a server on which to host the deliverable the team is creating, such as a web-based game or dynamical website. If this is required, student teams should consult with their project course instructor(s) and, if approved, then contact the IT department to request the server: [email]

A virtual server, either GNU/Linux or Windows, can be provisioned and control of it can be delegated to a designated member of the project team. The server will be maintained for the duration of the project, after which time it will be decommissioned and archived.

The main thing to note with the use of EIC servers is that they are solely for EIC class and project use. Personal use of EIC servers, services, or storage is not permitted. This includes storing personal files on EIC servers.

EIC Equipment and Resources

The EIC has a wide variety of items that can be signed out to students, faculty and staff for periods of time ranging from brief to semester-long. This checkout system is managed by several of the EIC staff members.

To sign out an item, students shall ask for it from the staff member there. Students must return the item, in person, to the same location as where they signed it out originally. Students cannot leave it in front of the staff member's door or give it to someone else. Until students see the staff member signs the item back in upon returning it, they are responsible for it.

EIC Facility Policies

Facility Hours

The EIC's facility hours align with the specific campus and building hours. Project rooms may be in separate locations, but signs will be posted, and email will be sent, in advance informing the students of the opening hours.

Facility rooms

Students are not allowed to attempt to "establish ownership" of the public terminals or work areas. Personal items must be kept in a project room or a locker, or they may get thrown out.

No EIC room is to be used by any person or group not affiliated with the EIC unless the Director approves such use in advance.

Keys

The Administrative Coordinator will assign keys. Every student will receive the general EIC key, and project room keys will be assigned by semester according to need. Keys must be signed out and in, and loss of a key will result in a 900 THB charge placed against the student's account. If the general key is lost and the entire space must be re-keyed, the EIC reserves the right to charge the student for the modifications. The EIC is not responsible for the loss of anything of value that may be left unattended in the project rooms or lockers. However, students should consider using lockers and locking their project rooms, as this will ensure a little extra security measure on their part.

All common EIC areas (the mailroom, library, lounge, EIC.) have combination locks and security cameras. The combinations will be changed regularly for security of these areas.

Meeting Rooms

Students need to reserve meetings rooms in advance in order to use them.

Project Rooms

In the case that there is a need for a dedicated and lockable project room, each project group will be assigned room keys. The Facilities Coordinator will give teams proper hanging supplies for walls, do not use tape or tacks. No permanent changes may be made to the space however without the permission of the Director. At the end of the semester, students are responsible for cleaning out their rooms before they leave. If a room is damaged, each team member will have a THB 2,500 charge placed on their student's account. To help reduce the potential for damage, the rooms are usually set up in advance for the teams.

In some rooms there is equipment set up by the department that runs various kiosks and other devices that are visible from the hallway. Under no circumstances are students to tamper with the equipment, unplug it or any of its peripherals, or borrow any of its cables. If students need those items, they need request them.

Etiquette for Facilities Rooms and Project Rooms

Basic etiquette and mutual respect apply, but there is one special note to be made with regards to noise in shared rooms. Computer speakers are not distributed with student workstations. In a shared space, students must respect others by not playing audio out loud. Students will often need to listen to audio to do their work, but when doing so they must use headphones.

The EIC does not stock headphones for general use because of hygiene. Therefore, students are responsible for bringing in their own headphones.

This policy is strictly applied in the common area. It is viewed as a guideline for project rooms as each project team can decide how they want to deal with audio for themselves. However, desktop speakers and headphones are still not provided in these cases.

“Grandfather” Policy

When policies are changed, it is because the department believes the new rules offer an improvement. Any such changes will be discussed at a meeting with EIC students. However, currently enrolled students whose degree program is affected by a change in policy may choose to be governed by the older policy that was in place at the time of their matriculation. In case degree requirements are changed and certain courses are no longer offered, the department will try to find some compromise that allows students to satisfy the original requirements.

University Policies and Expectations

It is the responsibility of each member of the EIC community to be familiar with university policies and guidelines.

CMKL University Statement of Assurance

CMKL University does not discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex, handicap or

disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Furthermore, CMKL University does not discriminate and is required not to discriminate in violation of any laws.

Student Acknowledgement

The EIC Student Handbook has been prepared for your information and understanding of the policies, philosophies and practices of the Entertainment Innovation Center at CMKL University. Please read it carefully. Upon completion of your review of the handbook, sign the statement below, and return it to the Director by the due date. A copy of this acknowledgment appears at the back of the handbook for your records.

By signing, you are stating that you have read a copy of the EIC Student Handbook and that you acknowledge, understand, accept, and agree to comply with the information and guidelines contained therein.

You understand this handbook is not intended to cover every situation that may arise during your course of study, but is simply a general guide to the goals, policies, practices, and expectations of the EIC. You understand that the EIC Student Handbook is not a contract and should not be deemed as such.

(Student Signature)

(Printed Name)

(Date)

NOTE: Please return to Entertainment Innovation Center, CMKL University by the Friday of the First Week of School.

APPENDIX A

Core Courses include:

Fundamentals of the Creative Innovation

This class prepares students for the full four-semester program at EIC with a focus on learning skills that develop leadership, teamwork, innovation, and positive social impact. Throughout the semester, EIC faculty and industry professionals will provide historical context for creative innovation. Students have the opportunity to begin shaping their professional networks, gain a sense of their field, and establish a fundamental understanding of how experiences engage and inform.

Improvisational Acting

This class is the EIC's "special sauce." It's the secret ingredient that adds zing to our program and gives you an edge. Taught concurrently with Building Virtual Worlds, Improvisational Acting fosters team building, exercises spontaneity, sharpens focus, and increases listening skills. Students learn to solve problems on the fly, build from scratch, stretch their imaginations, overcome inhibitions when communicating publicly, and working with others.

Visual Storytelling

Visual Story is a semester-long class that is taught simultaneously with Building Virtual Worlds. Students work in teams to write, produce, shoot and edit several visual story assignments. This class teaches essential skills for becoming a creative technological storyteller – how to think visually and aurally, as well as aspects of mise-en-scene, classical continuity-style coverage, transmedia, and temporal and spatial montage theory.

Building Virtual Worlds

Create a new world in just two weeks. Modeling our class after the groundbreaking ETC course by co-founder Randy Pausch, Building Virtual Worlds (BVW) challenges students to work quickly, creatively and collaboratively. Part of the immersion semester, BVW gives small teams of students two weeks to create a virtual world and/or explore productions and projects in various mediums in entertainment. It all culminates in a public festival to hundreds of spectators – and an incredible sense of accomplishment. In fact, many BVW ideas go on to become full-time research projects, student spin-offs and commercial successes.

APPENDIX B

Elective Courses include:

Programming

- 3D Art and Audio Pipeline for Game Development with Unity
- Introduction to 3D Modeling and Animation with Maya
- Introduction to 3D Printing
- Introduction to VR/AR/MR
- Introduction to Unity
- Introduction to IoT with Arduino and Raspberry Pi
- Software Development Processes and Methodologies

Business and Management

- Business of Gaming
- Influencer Marketing Strategy
- Introduction to New Product Development
- Legal Affairs in Entertainment
- Marketing Digital Media
- Media Distribution Channel
- Project Management

Entertainment

- Creative Producing
- Introduction to 360 Spatial Audio Production
- Introduction to E-sports
- Music Royalty, Music Streaming: How It Works
- Principles of Copywriting
- Producing Podcasts
- Production Management
- Technical Direction in Live Entertainment

Design and Technology

- Branded Entertainment
- Introduction to UX/UI Design
- Introduction to Interaction Design and Experiential Design
- Introduction to Human-centered Design
- Introduction to Motion Graphic
- Storytelling with Data

3D Art and Audio Pipeline for Game Development with Unity

Take your first step into the 3D art and audio pipeline. This class will guide you through the processes and the best practice involved in bringing 3D assets from Maya or audio assets from DAW into the final game. No matter if you're a 3D artist, a sound designer, a Unity programmer, or a team lead, this class will equip you with knowledge in one of the most challenging aspects in the game development. You will learn about asset management, different asset formats and limitations in Unity, different stages in the pipeline, and any technical challenges you would face in the team setting.

Introduction to 3D Modeling and Animation with Maya

This class provides an introduction to the core concepts and tools in 3D modeling and animation using the industry-standard software Autodesk Maya. Students will learn the fundamentals of 3D modeling, texturing, and basic animation through a series of hands-on exercises. After the class, students will know how to apply their 3D skills in game development and design, animated movies, and 3D printing.

Introduction to 3D Printing

3D printing (aka additive manufacturing) technology opens up the new possibilities for creativity and is more accessible like never before. This class discusses an emerging technology space within additive manufacturing that enables fast and precise creation of parts and 3D design. You will learn differences between 3D printer types (filament-based, laser sintering, and more), materials, and steps to create your first 3D print.

Introduction to UX/UI Design

The students will be introduced to user experience (UX) and user interface (UI) design, the role of designers, and the design process. To reinforce UX and UI design principles, students will assess and provide analysis on the design of an existing product and learn the most current design tool – Sketch.

Introduction in 360 Spatial Audio Production

As immersive 360-degree video formats grow in popularity, the cutting-edge of spatial audio technique is introduced to allow a listener to experience sound like never before. This class will cover the differences between binaural audio and ambisonics audio, practical techniques for capturing, editing, and mixing spatial audio before combining the finished mix with a 360 video.

Influencer Marketing Strategy

The class provides a comprehensive overview of the influencer marketing landscape and covers the key elements in planning, running and reporting on a successful campaign. By completing this class, you'll be able to confidently navigate the new digital advertising format,

understand the various influencer archetypes and campaign use cases, and comfortably run a campaign for the brand you represent. The class will cover the fundamentals of influencers and their audiences, discuss effective strategies and budgeting, as well as key campaign insights to save you time and money.

Introduction to VR/AR/MR

This class is designed for students who are new to mixed reality and want to learn about the principles of VR and AR technologies including optics, displays, stereopsis, tracking, and major hardware platforms. By the end of this class, you will have an understanding of the physical principles and knowledge to create a comfortable, high-performance VR and AR application using Unity.

Introduction to Interaction Design and Experiential Design

This class covers the fundamental understanding of the experiential design process from ideation to deployment, how the five senses work (smell, hear, sight, taste, touch), spatial design, and technologies necessary to develop the interactive experiences (Projector, Laser Projector, Arduino, Kinect, Touch Designer, etc.) By the end of the class, the students will get to develop their interactive experiences as the final project.

Music Royalty, Music Streaming: How It Works

This class provides students a comprehensive look at how to navigate today's music industry. The main focus is on the royalties system for artists and songwriters as well as how the music streaming platform works. Typical record label and publisher deals are examined, with an emphasis on demonstrating how various types of royalties are generated for songwriters, artists, composers, producers, labels and publishers.

Introduction to E-sports

This class introduces students to the business model framework in application of the E-sports industry – the essential foundation of how to create value via solving problems and fulfilling consumers' wants and needs. This class assumes rapid cycles of industry shock and disruption and as such, students learn the concepts of the business model to be adaptive thinkers, agile learners and how to seek and create new value in the emerging E-sports scene.

Storytelling with Data

Storytelling with data will teach you the fundamentals of data visualization and how to communicate effectively with data. You'll discover the power of storytelling and the way to make data a pivotal point in your story.

Introduction to Unity

Unity is one of the world's most popular development platform for creating 2D and 3D multi-platform games and interactive experiences. This class will cover the basic of the tool as well as encourage students to learn through the class projects.

Introduction to Web Programming

The class will cover the current tools available for developing websites and cover basics for HTML5, CSS, and Javascript.

Introduction to IoT with Arduino and Raspberry Pi

Gain an understanding of what the IoT is and the requirements to design your IoT solutions with Raspberry Pi and Arduino.

Branded Entertainment: Identity and Strategy

In this class, students will build a foundational understanding of branding through class discussions, articles and case studies. Students will examine the differences between brand and marketing/communications as well as the importance of brand as a business and its application to global branding. They will also examine how a company finds and communicates value proposition relative to their competitors, users and communities at large. Students will consider the impacts of brand valuation as well as the spectrum of branded content. Students will look at how branded content is evolving within the advertising landscape with new technology and communications methods and will then be able to apply this groundwork to various marketing and communications tactics globally and across all media platforms, both traditional and modern.

Software Development Processes and Methodologies

Students will get an overview of how software teams work. They will learn the different processes and compare the pros and cons of industry standard methodologies such as Agile, Kanban, and Scrum. By the end of the course, students will learn enough to have meaningful conversation around software development processes.

Introduction to Human-centered Design

In this class, students will learn how to design technologies that bring people joy, rather than frustration. You'll learn several techniques for rapidly prototyping (such as Wizard of Oz Prototyping) and evaluating multiple interface alternatives — and why rapid prototyping and comparative evaluation are essential to excellent interaction design. You'll learn how to conduct fieldwork with people to help you get design ideas, how to make paper prototypes and low-fidelity mock-ups that are interactive — and how to use these designs to get feedback

from other stakeholders like your teammates, clients, and users. Armed with these design-thinking strategies, you'll be able to do more creative human-centered design in any domain.

Principles of Copywriting

In this class you'll learn the principles, tactics, and classic writing frameworks that copywriters have been using for decades to create engaging content. This class will help you identify audiences, harness popular writing formulas, and create engaging headlines. Students will learn the basics of storytelling, strong call-to-action, hooks, and how to write excellent copy across mediums. Class exercises include writing an eye-catching headline and 500–1500 words of ad copy that resonates with the needs of your audience and aligns with a classic copywriting framework.

Introduction to Motion Graphic

This class will get you started with the basics of creating full Motion Graphics Videos using After Effects, which is widely used in the industry and on modern-day commercials. You'll learn how to apply the most useful visual effects to graphics and video, touch on all After Effects motion graphics properties and methods, and master the most useful techniques.

Creative Producing

This class explores all aspects of producing including both managing a project and developing creative ideas into a finished product. In this program, you will develop your storytelling, business, legal, organizational and collaborative skills that are vital for establishing your career in the entertainment industry. You will learn how to oversee the complete production of a project from concept to the screen/platform through a project-based class that trains you to take the lead.

Producing Podcasts

Want to share your ideas with the world? Create a Podcast. Podcasts are more popular than ever, which makes podcasting a great way to capture an audience of engaged listeners. With today's inexpensive recording equipment and editing software, it's possible to self-produce a podcast from anywhere. This course is designed to take you step by step through the entire process, from identifying your target audience, understanding SEO, planning your format, buying the right equipment, to recording and creating a professional sounding podcast, and distribution.

Introduction to New Product Development

Developing and launching successful new products is a key marketing value driver. Successful innovation ensures that your products stay competitive and that growth opportunities are not

missed. However, extensive research indicates that failure rates in this area are high. Developing and implementing a proven NPD (New Product Development) process increases success rates, together with managing the other key factors that drive results. In this class, students will learn the success factors in NPD, the definitions, and benefits and principles of good innovation management. Class exercises and coursework include developing new product strategy, generating and screening ideas, analyzing the business model, learning about product development and testing, and commercialization.

APPENDIX C
NATASHA PATAMAPONGS
Program Chair

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA, USA

Heinz School of Public Policy and Management

- Master of Entertainment Industry Management 2016 – 2018

College of Fine Arts & College of Humanities and Social Science

- Bachelor of Humanities and Arts in International Relations and Music Technology 2003 – 2008

WORK EXPERIENCES

- **LOVE IS ENTERTAINMENT CO., LTD.**, Bangkok, Thailand 2018 – Present
General Manager at Phat Cat Records
- **MELLOW MOTIF GROUP CO., LTD.**, Bangkok, Thailand 2009 – Present
Founder / Artist
- **STRANGE CARGO MUSIC (UNIVERSAL/DECCA)**, Los Angeles 2017 – 2018
Production Intern / Assistant to CEO
- **SMILES JAZZ & BISTRO**, Bangkok, Thailand 2012 – 2015
Founder / Managing Director
- **FREELANCE / CONSULTING**, Bangkok, Thailand 2012 - 2018
Talent agent / Entertainment and events / Producer

OTHER EXPERIENCES

- **WARNER MUSIC THAILAND** 2009 – 2012
Artist
- **'THE WINNER IS' (THAILAND) SEASON 2** 2015
Contestant / 3rd Runner Up
- **RANGSIT UNIVERSITY**, Bangkok, Thailand 2010 – 2016, 2018 – 2019
Adjunct Professor
- **TOUCH MAGAZINE**, Bangkok, Thailand 2011 – 2012
Writer / Columnist

KAMIN PHAKDURONG
Committee and Faculty of EIC Program

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EDUCATION

- | | |
|---|-------------|
| Massachusetts Institute of Technology , Cambridge, MA
<i>School of Engineering & Sloan School of Management</i>
<i>Master of Science in Integrated Design and Management</i> | 2016 - 2018 |
| Chulalongkorn University , Bangkok, Thailand
<i>Bachelor of Engineering in Information and Communication Engineering</i> | 2009 - 2013 |

WORK EXPERIENCES

- | | |
|--|-------------|
| • DRIVEBOT CO., LTD , Bangkok, Thailand
<i>Co-founder / Head of Design and Product / Crowd-funding Marketing Lead</i> | 2014 - 2017 |
| • BULK ASIA CO., LTD , Bangkok, Thailand
<i>UX Designer / Front-End Developer</i> | 2013 - 2014 |
| • FREELANCE / OUTSOURCING / CONSULTING , Bangkok, Thailand
<i>Chief Product Officer / UX Designer / UI Designer / Web Designer</i> | 2012 - 2018 |

RECENT PERSONAL PROJECTS

- | | |
|---|------|
| The Collaborative Research on Smart Lighting with Philips Lighting and MIT
<i>Conducted the design and purposed a design strategy and system architecture for the solution</i> | 2018 |
| <ul style="list-style-type: none">• Dinovocab (2018) – Learn English through reading, powered by Machine Learning and funded by MIT• Hit Music Data Analysis and Visualization (2018) – Explore the pattern behinds popular songs on Spotify• Macbeth VR (2017) and Drift VR (2017) – Edutainment Virtual Reality experiences funded by MIT• Guest Speaker and Lecturer – Shared experiences in design, entrepreneurship, and technology in various occasions and institutes such as Chulalongkorn University, Silpakorn University, Sketch Meetup, etc. | |

AKKARIT SANGPETCH, Ph.D.

CMKM Program (Thailand) Director, CMKL University

Executive Program Committee, Computer Innovation Engineering
Department of Computer Engineering, Faculty of Engineering
King Mongkut's Institute of Technology Ladkrabang

akkarit@cmkl.ac.th | +66830963916 | <https://cie.kmitl.ac.th/faculty/akkarit/>

EDUCATION

- | | |
|--|-------------|
| Carnegie Mellon University, USA
<i>Electrical and Computer Engineering</i> <ul style="list-style-type: none">• Doctor of Philosophy | 2005 – 2013 |
| Carnegie Mellon University, USA
<i>Electrical and Computer Engineering</i> <ul style="list-style-type: none">• Master of Science | 2005 – 2010 |
| Carnegie Mellon University, USA
<i>Computer Science and Electrical and Computer Engineering</i> <ul style="list-style-type: none">• Bachelor of Science with University Honors | 2001 – 2005 |

WORK EXPERIENCES

- | | |
|---|----------------|
| King Mongkut's Institute of Technology Ladkrabang, Thailand
<i>Lecturer, Department of Computer Engineering, Faculty of Engineering</i> | 2013 – Present |
| VMware, Inc, Palo Alto, CA, USA
<i>Member of Technical Staff – Cloud Infrastructure Management</i> | 2012 – 2013 |

PUBLICATIONS

- Pongpayak Boontaetae, Orathai Sangpetch, **Akkarit Sangpetch**, “*RDI: Real Digital Identity based on Decentralized PKI*,” in Proceedings of the 22nd International Computer Science and Engineering Conference (ICSEC 2018), Chiang Mai, Thailand, 2018
- Amelie Bonde, Shijia Pan, Orathai Sangpetch, **Akkarit Sangpetch**, Woranun Woramontri, Pei Zhang, “*Structural vibration sensing to evaluate animal activity on a pig farm*,” in Proceedings of the First Workshop on Data Acquisition to Analysis (DATA 18), Schenzen, China, 2018

- Orathai Sangpetch, **Akkarit Sangpetch**, “*Graph-based, Microservice Architecture for Federated Smart City Data Interoperability*,” in EAI International Workshop on Smart Cities Interoperability and Standardization, Helsinki, Finland, 2017
- **Akkarit Sangpetch**, Orathai Sangpetch, Nut Juangmariskul, Supakorn Warodom, “*Thoth: Automatic Resource Management with Machine Learning for Container-based Cloud Platform*,” in Proceedings of the 7th International Conference on Cloud Computing and Services Science, Porto, Portugal, 2017
- Orathai Sangpetch, **Akkarit Sangpetch**, “*Security Context Framework for Distributed Healthcare IoT Platform*,” In: Ahmed M., Begum S., Raad W. (eds) Internet of Things Technologies for HealthCare. HealthyIoT 2016. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 187. Springer, Cham
- **Akkarit Sangpetch**, Hyong S. Kim, “*VDEP: VM Dependency Discovery in Multi-tier Cloud Applications*,” in Proceedings of IEEE 8th International Conference on Cloud Computing (CLOUD 2015), New York, NY, USA, 2015
- **Akkarit Sangpetch**, Orathai Sangpetch, “*Self-Scaling Platform as a Service*,” In Proceedings of the International Conference on Engineering Science and Innovative Technology (ESIT 2014), Krabi, Thailand, 2014
- **Akkarit Sangpetch**, “Tactic: Traffic Aware Cloud for Tiered Infrastructure Consolidation,” Ph.D. Dissertation, Carnegie Mellon Univ., Pittsburgh, PA, USA, 2013
- Orathai Sukwong, **Akkarit Sangpetch**, Hyong S. Kim, “SageShift: Managing SLAs for Highly Consolidated Cloud,” in Proceedings of IEEE INFOCOM 2012, Orlando, FL, USA, 2012
- **Akkarit Sangpetch**, Andrew Turner, Hyong S. Kim, “How to Tame Your VMs: An Automated Control System for Virtualized Services,” in Proceedings of the Large Installations Systems Administration (LISA) Conference, San Jose, CA, USA, 2010
- Andrew Turner, **Akkarit Sangpetch**, Hyong S. Kim, “Empirical Virtual Machine Models for Performance Guarantees,” in Proceedings of the Large Installations Systems Administration (LISA) Conference, San Jose, CA, USA, 2010

RESEARCH AND DEVELOPMENT

- Smart City Innovation Hub Program Chair, Council of University Presidents of Thailand 2017 - 2018
- CityViz: Automated visualization for heterogeneous Smart City API
- E-Care: Home-care System for Aging and Physical Therapy 2016 - 2017
- Doome: Sentimental prediction form social media using location-based system
- LIFE: Scalable Log Analysis and Intrusion Detection System 2015 - 2016
*Runner-up in Thailand's 2016 National Software Contest (NSC 18),
Science and Technology Development Project*
- Thoth: Dynamic Resource Management for Platform-as-a-Service
*Runner-up in Thailand's 2016 National Software Contest (NSC 18),
Linux Application Development*
- Tiramisu: Software-defined Data Platform

*Honorable mention in Thailand's 2016 National Software Content (NSC 18),
Linux Application Development*

- Automated Security Assessment for Data Center 2014 - 2015
- Cybersecurity War Game
- Graphical Modeling and Interactive Visualization for Data Center Management
*Second Runner-up in Thailand's 2015 National Software Contest (NSC 17),
Science and Technology Development Project*
- Distributed Cloud Monitoring and Real-time Analysis
- Distributed Resource Scheduling for SLA-oriented Cloud 2010 - 2013
- Virtual Resource Management for Multi-tier Applications 2009 - 2010
- Service-oriented Virtual Machine Provisioning 2008 - 2009
- Visualizing Distributed Firewall in Large-scale Service Providers 2006 - 2007
- Argus Network Security Management System 2005 - 2006

TEACHING EXPERIENCES

- **B.Eng. in Computer Innovation Engineering:** Fundamentals of Programming, Computer Systems, Information Network and Cyber Security
- **B.Eng. in Computer Engineering:** Cloud Computing, Operating Systems, Unix Operating System, Object Oriented Analysis & Design
- **M.Eng. in Computer Engineering:** Special Topics in Software Technology

ORATHAI SANGPETCH, Ph.D.

Vice President of Research and Strategy, CMKL University

Executive Program Committee, Computer Innovation Engineering
Department of Computer Engineering, Faculty of Engineering
King Mongkut's Institute of Technology Ladkrabang

orathai@cmkl.ac.th | +66922520155 | <https://cie.kmitl.ac.th/faculty/orathai/>

EDUCATION

Carnegie Mellon University, USA 2001 – 2013
Electrical and Computer Engineering

- Doctor of Philosophy
- Master of Science
- Bachelor of Science with University Honors

WORK EXPERIENCES

King Mongkut's Institute of Technology Ladkrabang, Thailand 2013 – Present
Lecturer in Department of Computer Engineering, Faculty of Engineering

VMware, Inc, Palo Alto, CA, USA 2012 – 2013
Member of Technical Staff – Performance Engineering

PUBLICATIONS

- Pongpayak Boontaetae, **Orathai Sangpetch**, Akkarit Sangpetch, “*RDI: Real Digital Identity based on Decentralized PKI*,” in Proceedings of the 22nd International Computer Science and Engineering Conference (ICSEC 2018), Chiang Mai, Thailand, 2018
- Amelie Bonde, Shijia Pan, **Orathai Sangpetch**, Akkarit Sangpetch, Woranun Woramontri, Pei Zhang, “*Structural vibration sensing to evaluate animal activity on a pig farm*,” in Proceedings of the First Workshop on Data Acquisition to Analysis (DATA 18), Schenzen, China, 2018
- **Orathai Sangpetch**, Akkarit Sangpetch, “*Graph-based, Microservice Architecture for Federated Smart City Data Interoperability*,” in EAI International Workshop on Smart Cities Interoperability and Standardization, Helsinki, Finland, 2017
- Akkarit Sangpetch, **Orathai Sangpetch**, Nut Juangmariskul, Supakorn Warodom, “*Thoth: Automatic Resource Management with Machine Learning for Container-based Cloud Platform*,” in Proceedings of the 7th International Conference on Cloud Computing and Services Science, Porto, Portugal, 2017

- **Orathai Sangpetch**, Akkarit Sangpetch, “*Security Context Framework for Distributed Healthcare IoT Platform*,” In: Ahmed M., Begum S., Raad W. (eds) *Internet of Things Technologies for HealthCare*. HealthyIoT 2016. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 187. Springer, Cham
- Akkarit Sangpetch, **Orathai Sangpetch**, “*Self-Scaling Platform as a Service*,” In Proceedings of the International Conference on Engineering Science and Innovative Technology (ESIT 2014), Krabi, Thailand, 2014
- **Orathai Sukwong**, “*Pack?: VM Resource Scheduling for Fine-grained Application SLAs in Highly Consolidated Environment*,” Ph.D. Dissertation, Carnegie Mellon University, Pittsburgh, PA, USA, 2013
- **Orathai Sukwong**, Hyong S. Kim, “*DPack: Disk scheduler for Highly Consolidated Cloud*,” In Proceedings of the 32nd IEEE International Conference on Computer Communications (INFOCOM 2013), Turin, Italy, April 2013
- **Orathai Sukwong**, Akkarit Sangpetch, Hyong S. Kim, “*SageShift: Managing SLAs for Highly Consolidated Cloud*,” In Proceedings of the 31st IEEE International Conference on Computer Communications (INFOCOM 2012), Orlando, FL, USA, April 2012
- **Orathai Sukwong**, Hyong S. Kim, “*Is Co-scheduling too expensive for SMP VMs?*” In Proceedings of the 6th ACM Conference on Computer Systems (EuroSys 2011), Salzburg, Austria, April 2011
- **Orathai Sukwong**, Hyong S. Kim, James C. Hoe, “*An Empirical Study of Commercial Antivirus Software Effectiveness*,” IEEE Computer Magazine, vol.44, no.3, pp.63,70, March 2011

RESEARCH PROJECTS

- | | |
|---|-------------|
| Integrated Smart City Cloud Platform | 2017 - 2018 |
| • CityViz: Automated visualization for heterogeneous Smart City API | |
| • E-Care: Home-care System for Aging and Physical Therapy | 2016 - 2017 |
| • Doome: Sentimental prediction form social media using location-based system | |
| • LIFE: Scalable Log Analysis and Intrusion Detection System | 2015 - 2016 |
| <i>Runner-up in Thailand's 2016 National Software Contest (NSC 18),
Science and Technology Development Project</i> | |
| • Thoth: Dynamic Resource Management for Platform-as-a-Service | |
| <i>Runner-up in Thailand's 2016 National Software Contest (NSC 18),
Linux Application Development</i> | |
| • Tiramisu: Software-defined Data Platform | |
| <i>Honorable mention in Thailand's 2016 National Software Content (NSC 18),
Linux Application Development</i> | |
| • Automated Security Assessment for Data Center | 2014 - 2015 |
| • Cybersecurity War Game | |
| • Graphical Modeling and Interactive Visualization for Data Center Management | |
| <i>Second Runner-up in Thailand's 2015 National Software Contest (NSC 17),
Science and Technology Development Project</i> | |

- Distributed Cloud Monitoring and Real-time Analysis
- Integrated Virtual Machine Scheduling for Fine-grained Application SLAs 2009 - 2013
- Behavioral-based malware detection using virtual execution 2005 - 2009

TEACHING EXPERIENCES

- **B.Eng. in Computer Innovation Engineering:** Fundamentals of Programming, Computer Systems, Information Network and Cyber Security
- **B.Eng. in Computer Engineering:** Cloud Computing, Operating Systems, Unix Operating System, Object Oriented Analysis & Design
- **M.Eng. in Computer Engineering:** Special Topics in Information Systems