

Business Project Final Report

Elasia Rodriguez
Implementing CCPE at IMSA
Betty Hart - Innovation Center Program Manager
Steve and Jamie Chen Center for Innovation and Inquiry (IN2)
22 April 2020



The STEM Pathways Project Team and I work with the Center for Innovation and Inquiry (IN2) on implementing the College and Career Pathway Endorsements program (CCPE) through the Post-Secondary Workforce Readiness Act (PWRA or PWR act). I am the lead intern, Elasia Rodriguez, and the rest of the project team consists of Gloria Wang, Jaelynn Abdullah, and Aryan Gandhi under the advisory of Betty Hart. The focus of the project is to assess IMSA's courses and offerings and how they can assist students in college-readiness and prepare students for the future of work. The CCPE program is a planned high-school pathway that integrates school, activities, and work experience to demonstrate student aptitude in a chosen area of study. The project focuses on the following areas of the program: Manufacturing, Engineering, Technology, and Trades (METT), Information Technology (IT), Health Sciences and Technology (HST), and Finance and Business Services (FBS). There are more endorsements than the 4 listed, but those will not be explored as much in this paper and will be used in a continuation of this project. After inventorying IMSA's offerings that relate to the Endorsements, a guide will be developed to assist students with navigating both IMSA's offerings and the CCPE program. This guide will be available in both a physical and digital copy and help students decide what courses they should take that will best prepare them for the future they have ahead of them. The plan for this internship remains the same but will need to be extended past this school year due to the COVID-19 outbreak and stay-at-home order.

The project team and I have worked with a few organizations for this project including: IMSA, IN2, the PWR act, and the CCPE program. IMSA is a school of higher education for students from 10th to 12th-grade committed to advancing the human condition and becoming global leaders in both the teaching and learning of STEM and related fields. IMSA's center for innovation, IN2, is committed to creating a network of innovators, designers, and entrepreneurs to lead in innovative and entrepreneurial thinking. PWRA is "a student based and competency based approach to helping students achieve college and career readiness" in Illinois. CCPE is "a voluntary system for school districts to award college and career pathways endorsements on high school diplomas. The endorsement will demonstrate students' readiness for college and careers and completion of instruction and professional learning experiences in a selected career interest area". This internship is my first time working with school policies and educational plans. Getting to work with both the IMSA side and the state side of the PWR act has been a really informative experience. At first glance, these kinds of policy changes seem simple because school is school, however, it's not that simple. So far in my internship, this process has proven to be a long one. Before even becoming an act, policies take a lot of organizations, research, and hard work to create. On my end, I have also had to research, assess, research some more, and re-evaluate. Since my project is not quite yet finished, the last steps would have been to present my work, fix any issues, and finally get the program implemented and that last can be broken down much more as well. Working with this policy at IMSA is also quite a different experience than other schools. After researching and going to a conference, I realized that IMSA does things very differently and finding a policy that fits IMSA or making IMSA fit with a policy are both very hard tasks. IMSA is unique as it is not necessarily considered a high school but a school of higher education. Along with that challenge, IMSA does not have dual credit, college credit, or AP courses which are fundamentals in the CCPE program. To get this program approved by the IMSA administration, a lot of structural changes would need to be made. Talking with the college and academic advisors was the next step in our process to discuss the benefits and drawbacks of including college-preparedness courses at IMSA. The same would have to be



brought up to the president and principal's office in relation to their future plans for IMSA. IMSA already has many of the experiences that the CCPE program looks for in a high school to be able to implement this program. Some of the important aspects are advanced and college-level courses, opportunities for work experience and career development, and classes that meet specified real-world competencies. CCPE not only works well for the students preparing them for college and saving them money in the long run but it also can save or create revenue for schools that run this program. CCPE acts as a bridge from post-secondary to secondary education the individualized plans that advance students more than a basic curriculum for all students. IMSA does a great job of providing many classes to choose from back the framework behind the classes is missing and this is where CCPE comes in. IMSA classes are simply meant to teach you what the class is about and prepare you for either a test or college but CCPE would help IMSA classes look further down the line focusing on how the classes you take now prepare you for a career and a future.

For the project over the course of the past several months, the I-Day schedule for this project has constantly changed. I did a lot of different types of work that I will categorize in phases. The first phase was researching the background of the CCPE program and the PWR act to fully understand the reach of the programs and how they can be implemented effectively at IMSA. This was the base for starting the project. In this phase, we figured out what our goals for this project were and some insight into the CCPE program. This led to our next phase, planning. We spent a lot of time planning and preparing to collect data on IMSA classes and courses. The project team and I went through many documents and spreadsheets to compile a list of all the classes, clubs, and student organizations on campus.

Class	Co-Coordinator	Advisors	Class	Co-Coordinator	Advisors	Class	Co-Coordinator	Advisors
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English I	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English II	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English III	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English IV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English V	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English VI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English VII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English VIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English IX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English X	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XIV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XVI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XVII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XVIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XIX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXIV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXVI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXVII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXVIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXIX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXIV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXVI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXVII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXVIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XXXIX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XL	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLIV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLV	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLVI	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLVII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLVIII	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English XLIX	Michelle Peterson	Michelle Peterson
Advanced American Literature	Michelle Peterson and Paul Peterson	Michelle Peterson	Mathematical Foundations II	Michelle Peterson	Michelle Peterson	English L	Michelle Peterson	Michelle Peterson

This is an image of the master list of IMSA's offering including the advisors, teachers, and other staff members in charge of these offerings.




Out of this list, we assessed all the offerings in terms of 4 endorsements, METT, IT, HST, and FBS. Not only did we organize by endorsement but by competency as well.


Competencies	Offerings									
1. Equipment Safety	Granger Lab	Robotics	INZ Makerspace	Science Labs	SIR	Tech Society	EPOCH	Chem Club	Science Team	Engineering
2. Manufacturing Environment	INZ Makerspace	Granger Lab	Robotics	SIR						
3. Personal Health and Safety	Granger Lab	Robotics	INZ Makerspace	EPOCH	SIR	Operations	Facilities			
4. Spatial Reasoning	CAD CLUB	INZ Makerspace	Computational S	3D Design	FOUR OOP	Granger Lab				
5. Process, Design, and Development	CAD CLUB	Robotics	SIR	Engineering						
6. Installation	Engineering	Robotics	INZ Makerspace	Granger Lab						
7. Customer Focus	Alisa	LEAD	Student Ambassadors	INZ Youth Board	PMI	Robotics and Co				
8. Quality Assurance and Continuous Improvement	Power Patch	Internship	OOP	SIR	Robotics	Engineering				
9. Digital Manufacturing	CAD CLUB	SIR								
10. Supply Chain Logistics	Robotics	INZ Makerspace	SIR	INZ Youth Board						
Other Possibilities	MSA									

This is an example of one of the four endorsements and all the classes and clubs we were interviewing for this endorsement.

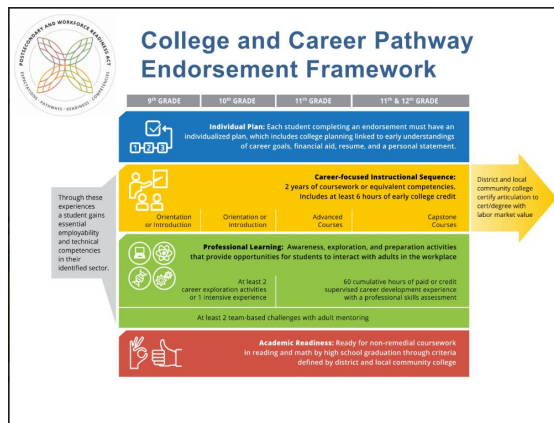
After preparing for quite some time, we did more research on the act and the program. We set up interviews and based our questions on the following important documents.



 TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR ADVANCED MANUFACTURING & ENGINEERING	
Equipment Safety	Students can use their understanding of equipment usage, practices, and procedures to maintain a healthy, safe, and secure work environment.
Manufacturing Environment	Students can use their understanding of workstations, tools, and equipment operations to safely navigate a manufacturing environment.
Personal Health & Safety	Students can use their understanding of personal safety and environmental regulations to comply with local, federal, and company health/safety demands.
Spatial Reasoning	Students can use their understanding of objects in relation to one another to understand three-dimensional imaging.
Process, Design, & Development	Students can use their understanding of technical drawings and schematics to complete the design and development process.
Installation	Students can use their understanding of tools to assemble and disassemble simple tools.
Customer Focus	Students can use their understanding of communication and project management to understand client needs and complete project accordingly.
Quality Assurance & Continuous Improvement	Students can use their understanding of product and process to meet quality systems requirements as defined by customer specifications.
Digital Manufacturing	Students can use their understanding of digital manufacturing tools and computer-based programs to complete the design and develop implementation process.
Supply Chain Logistics	Students can use their understanding of materials, suppliers, and internal systems to plan and monitor movement and storage of materials and products.

 TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR HEALTH SCIENCES & TECHNOLOGY	
Medical Terminology	Students can use their understanding of basic medical terminology, including abbreviations, acronyms, and diagnostic terms, to communicate effectively with healthcare personnel and patients.
Healthcare Industry & Culture	Students can use their understanding of the basic components and culture of the health industry to understand the purpose and function of key stakeholders, practices, practitioners, and regulations.
Healthcare Delivery Practices	Students can use their understanding of the practices, procedures, and personnel involved in delivering quality patient care to evaluate the appropriateness of a plan, instructions, or assigned task.
Healthcare Industry Ethics	Students can use their understanding of confidentiality, morality, and legal concepts to evaluate and apply the merits, risks, and social concerns to workplace decisions.
Health Professions Licensure	Students can use their understanding of education requirements, licensure, and certification to ensure proper adherence to regulations that guide service delivery.
Emergency Response	Students can use their understanding of emergency procedures and protocols to respond to and expedite safety in an emergency situation.
Healthcare Confidentiality	Students can use their understanding of HIPPA to adhere to legal requirements and maintain confidentiality.
Healthcare Personnel & Roles	Students can use their understanding of the practices, procedures, and personnel used to deliver quality patient care to identify one's role on a team and within the overall health environment.
Healthcare Sanitation	Students can use their understanding of sanitation and health regulations to ensure that healthcare facilities and tools meet standards for cleanliness.
Healthcare Rules & Regulation	Students can use their understanding of basic laws and regulations (Patient Bill of Rights, CLIA, EMTALA, OSHA, etc.) to meet accreditation standards and to obey the law.

 TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR FINANCE & BUSINESS SERVICES	
Cash & Capital Principles	Students can use their understanding of the nature of cash, monetary systems, and the value of money in order to recognize the risk, return, and opportunity cost associated with capital.
Technical Applications	Students can use their understanding of spreadsheets and accounting software to maintain, update, and retrieve data from records.
Project Management	Students can use their understanding of time management and organization to set timely and measurable goals leading to project completion.
Principles of Economics & Business	Students can use their understanding of micro- and macro- economics to understand how an economy functions locally and globally.
Financial Reporting	Students can use their understanding of financial statements to assess a business's financial information.
Financial Statements	Students can use their understanding of financial statements to prepare and interpret balance sheets, income statements, cash flow statements, and related earnings.
Customer Care & Marketing	Students can use their understanding of market demands to meet the needs of a client.
Business Operations	Students can use their understanding of transaction management to perform business operations.
Principals of Customer Relationship Management	Students can use their understanding of customer communication and customer relationship management software to attract new customers and sustain existing customers.
Fundamentals of Sales	Students can use their understanding of personalized service and market demands to secure successful sales interactions.



 TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR INFORMATION TECHNOLOGY	
Basic Principles of Information Technology Concepts, Systems, Platforms & Tools	Students can use their understanding of fundamental IT concepts, systems, platforms, tools, and technology to understand the common roles of IT professionals.
Security	Students can use their understanding of malware, firewall, IDS, and IPS to recognize and describe basic threats to networked computers.
Logic & Fundamentals of Computer Languages	Students can use their understanding of how computer languages communicate to build basic mobile and web applications.
Routing & Network Configuration	Students can use their understanding of common networking protocols to explain the purpose of routing, network configuration, and monitoring.

User & Customer Support	Students can use their understanding of the range of services used to provide assistance and technical support to help users implement and solve problems related to information technology.
Basic Principles of Hardware	Students can use their understanding of communication systems hardware to describe the purpose and function of fundamental end user devices, switches, routers, wireless access points, etc.
Risk Management & Information Assurance	Students can use their understanding of the standards and applications needed to protect the confidentiality, integrity, and availability of information and information systems.
Basic Principles of Software Development	Students can use their understanding of designing, writing, testing, and maintaining source code of computer programs to manage and maintain software.
Networks	Students can use their understanding of hardware and software to facilitate communication between people and computer systems.
Basics of Virtualization & Cloud Computing	Students can use their understanding of the features, benefits, and concepts of virtualization and cloud computing to differentiate among types of cloud services.

These images are of the four main endorsements my project focused on and the framework for the CCPE program that outlines the requirements.

We set interviews through Calendly and recorded all the data in separate documents. We decided to include two other endorsements while we were collecting data, Arts and Communication (A&C) and Human and Public Services (HPS).



Internship 9am – 4pm Illinois Mathematics and Joyce Symoniak and Elasia R Ray Shang and Elasia R
Joe Golab and Elasia R
Lunch Break and Elasia R
Gowri Warikoo and Elasia R
David Lundgren and Elasia R
Sowmya Anjur and Elasia R
Ms. Shirley and Elasia R
Joyce Symoniak and Elasia R

DONG: CampSci	
General Questions and Information	
Summary of CCPE	<p>Post-Workforce Readiness Act College and Career Pathways Endorsements We are working to get the endorsements on transcripts to certify the skills learned in IMSA courses and offerings. We are surveying all of IMSA's offerings and how they compare with the skills needed in these 4 industries. We are making a guide of IMSA offerings on how to learn the different skills and competencies so that students can complete an endorsement and be certified in an area that will help prove their skill level once going into the workforce and/or college.</p>
Future of Work	Currently, graduating high schoolers are not going into the workforce and college prepared with the skills needed. The future of work helps prepare them for what comes next after high school and we are working on helping students get the skills they need for their success in the future.
Overview of the project team	We are Betty's project team. Head intern and two project team members.
Do you have any questions for us?	
Class Info (Learnings)	<ul style="list-style-type: none"> Learn to code in order to help with scientific research. Be able to program while others can't (in the lab). Skills based to both science and coding No database Algorithms Thinking about computers and like computers Machine learning
Class Info (General/Other)	<ul style="list-style-type: none"> Code and academic Class was developed because of the horrible code Dr. Dong saw at Fermilab. Original work was academic, but very much skill-based. No content, all skill-based. Has lots of marketable skills.
Class Aspirations	<ul style="list-style-type: none"> Wants to build a climate simulation Ecology unit (Ecology or behavior?)
Why CCPE (wait till end)	We are doing this for students and to promote student success in the future.

MEIT Competencies

1. Equipment Safety	X/ X	Both abs and si bio
2. Manufacturing Environment		
3. Personal Health and Safety	X	Lab safety
4. Spatial Reasoning	/	3d models of proteins
5. Process, Design, and Development	X	Design protein structures
6. Installation		
7. Customer Focus	X	Abs
8. Quality Assurance and Continuous Improvement		
9. Digital Manufacturing	/	
10. Supply Chain Logistics		

The first image is one of the I-Days where we conducted interviews and the other two images are of different sections of our interview reports

Before finishing this project, two other project team members and I went to a conference about CCPE and the future of work. I learned a lot of details about the program and how it is being implemented in schools. While I took many notes on the content of the conference, my report on the conference really puts in the context of IMSA and how I could use what I learned and this program to better IMSA. Here is my report. “My goal for attending this event was to get more information on the College and Career Pathway Endorsements program, how it is being implemented, and how IMSA can implement the program as well. Some important notes about the program that stood out to me were that CCPE works more to prepare you for a successful career through college and not just a career in general. Also, this program requires certification on IMSA’s side to guarantee learning meets college and AP standards to have dual-credit and AP classes at IMSA. I went to 5 sessions, including the main sessions, and a lot of the presenters had important information pertaining to our work here at IMSA. During the first session, JFF presented a lot of data on what work currently looks like and what we need to do to get to the future of work. After listening and taking notes about their presentation, I think IMSA is falling behind. Each year the application pool is dropping, and it is being clear that the opportunities at IMSA are no longer outweighing the pros of staying at home. Many schools are now implementing dual-credit courses, AP classes, etc. and these classes are advancing students in preparation for college. However, IMSA doesn’t offer this. With our current well-educated staff, having AP and dual-credit classes should be no hard task for IMSA because we already have the faculty’s talent and the student’s drive to learn shown in the number of students at IMSA that self-study for AP exams. Another important aspect is the connection between IMSA and local businesses/colleges. These connections will help provide students with the next step in their education including SIR’s, internships, college courses, college resources, etc. for the students to use. Not only will this give IMSA a leg up from other schools but also provide the students with resources to further their learning. The next session I went to was Guidance for Guides and this session interested me because I wanted to know what IMSA’s CAC office was missing in terms of tools for students. Some important notes address IMSA as a whole such as helping students with post-secondary readiness and not just college. Whether that’s a career now or a career further down the line, maybe an internship or a master’s degree, whatever it looks like IMSA should be invested in helping students now to get to that point. Also, IMSA needs to be more



involved in their graduate students' success as a whole and on a by-school basis. IMSA should know how many graduates were sent to a school and what their success looks like. IMSA prides itself on an almost 100% percent graduation rate but a student's education does not stop at IMSA which is what IMSA fails to investigate. IMSA also needs to take a step away from preparing students based on IMSA's standard and start preparing students by colleges' standards. In the long run, IMSA should help students get ready for a college that will prepare them for a job. This is also where work-based learning comes in to prepare students for the real-world experience of a college or career that demands more than just being a good student. This type of learning will show students where they need to step up their game to obtain real success when they get to the career part of their lives. The last note I had for IMSA from the conference was to push for individual plans for students and helping each student achieve success. However, success is a very generalized term and it will and should look different for each student. Success for a student should not be defined by IMSA, rather, IMSA should help a student define success for themselves. Overall, I think this conference has taught me a lot about what IMSA is missing for its students and I think the CCPE program will help get IMSA back on track in terms of aiding their students in genuine success." This conference provided important information and insight into the project. Our next steps were to complete the guide and present our findings and project to IMSA administration. Due to the closing of IMSA, we did not get that far yet, but we have started compiling all our data for the guide.

Health Sciences and Technology							Manufacturing, Engineering, Technology, and Trades						
Pathophysiology	Chemistry						SI BIo/ABS	FTC Robotics	Future Engineers	Engineering	LEAD	3D Design	
Medical Terminology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment Safety	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Healthcare Industry and Culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manufacturing Environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Healthcare Delivery and Practices	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal Health and Safety	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Healthcare Industry Ethics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spatial Reasoning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Health Professions Licensure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Process, Design, and Development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency Response	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Healthcare Confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Customer Focus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Healthcare Personnel and Roles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quality Assurance and Continuous Im	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Healthcare Sanitation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Digital Manufacturing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Healthcare Rules and Regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Supply Chain Logistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information Technology							Art and Communications						
Computer Science	CSI	Cybersecurity					Hadron	Psych Club					
Basic Principles of Information Technology Concepts, and Tools	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Creating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Presenting, Performing, and Producing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logic and Fundamentals of Computer Language	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Responding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Routing and Network Configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Connecting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
User and Customer Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Investigation and Research	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basic Principles of Hardware	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management and Information Assurance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Creative Technology and Design	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basic Principles of Software Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Resource Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Networks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brand Identity, Marketing, and Brand	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basic Virtualization and Cloud Computing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Human Interaction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finance and Business Services							Human and Public Services						
Class Clubs	Student Council	TALENT					LEAD	Student Council					
Cash and Capital Principles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Childhood and Student Development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical Applications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Curriculum and Program Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Curriculum Relevance and Collaboration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Principles of Economics and Business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Managing and Monitoring Learning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equitable Treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Statements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Learning Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Care and Marketing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Citizenship, Family, and Community Relationships	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business Operations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Health, Safety, and Legal Responsibilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Principles of Customer Relationship Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Evaluation and Assessment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fundamentals of Sales	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Observation and Adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This image shows the draft of what the course guide will look like. These tables show what classes meet certain competencies in each endorsement.



The last phase of presenting our work thus far would have been a difficult process and getting approval from IMSA administration would be more difficult. The work would have included making presentations, convincing the CACs of the benefits of this program, convincing IMSA administration of the benefits, presenting to the office of diversity, equity, and inclusion as well as any additional offices and student organizations that deal with school policy, such as Student Council.

During my internship there were a few questions I focused on answering with my project. One being, how does the CCPE fit in with IMSA's current curriculum and academic standards. The other was, how can we effectively implement the CCPE program at IMSA. Although these questions sound similar, they are actually quite different. The first question led the project team and I down the path of assessing IMSA's offerings and comparing that to what was required of students in the CCPE program. On the other end, the second question addresses what IMSA either has or lacks in terms of resources for its students that would prevent the implementation of this program. Both questions have led to deep dives into IMSA's standards as well as the standards of the PWR act. Researching IMSA was the easier end of the research since I attend the school and I got to speak with many teachers and advisors. With the other half of the research, I did a lot of reading on the act from reports, from their website, and I went to a conference to learn more about the act and its current implementation in other schools. I have spent nearly 6 hours every I-Day for the past 4 months researching and learning about this program and I have learned quite a bit about how exactly these kinds of policies are implemented, supported, and run. I have also learned a lot more about interviewing and how to portray confidence in my work. That also goes along with gaining the confidence to ask questions and present myself in a professional situation to gain more information and support for my work. There is still quite a bit of work left for my internship and due to the stay-at-home order in Illinois from COVID-19, I have not been able to finish interviews for my project, working with my project team, and talking to IMSA administration.

After working on this internship, I have learned a lot about the PWR act and the CCPE program as well as important skills for myself. I learned a lot about timing with this internship. Having to interview many people is a challenge in itself and having to organize those meetings and fitting schedules together is a whole other challenge. Also, working with my project team weekly also taught me a lot about timing as well as how to delegate. The project I worked on was definitely meant to be tackled by a group and without delegating tasks we would not have gotten as much done as we did. I also learned about the importance of professionalism, this includes attentiveness, timeliness, and a host of other things when working in a business setting. I had never had to maintain a professional appearance for something before and as a person who is always running behind, I had to relearn time management to get to where I needed to be on time. Aside from personal growth, I am still learning about the importance of an education that is future focused. Whether college is in your future or not, it is important to have a plan for your future that includes significant work that will provide for your needs, fulfills you, and make an impact, otherwise, why bother doing it. I have also learned a bit about how school policy works. Although I did not get to the stage of my internship where I got to experience this the most, going to a conference and seeing how other schools had to deal with the situation I was about to enter taught me a bit about what needed to be done here at IMSA. My advice for this project is if you are going to work on something like this, you should be totally committed and really immerse yourself in the project. The project is a lot of work, but I find it quite fulfilling because



this project could bring real change that can have a widespread effect on many students after me. I also think it's important to be all in because after researching and interviewing and learning I began to realize all these problem areas that needed attention. Being committed to fixing those continuously increasing problems is a really valuable quality and something I myself am still working towards. I recommend that my mentor get even more people to work on this project so the work can get done faster and the surmounting problems are manageable and the solutions attainable.

Sources

Illinois, Advance. "POSTSECONDARY & CAREER EXPECTATIONS (PaCE)."

Postsecondary & Workforce Readiness Act, pwract.org/.

"Impacts & Outcomes." *Illinois Mathematics and Science Academy*, www.imsa.edu/discover-imsa/impacts-outcomes/.

"Mission and Beliefs." *Illinois Mathematics and Science Academy*, www.imsa.edu/discover-imsa/mission-and-beliefs/.

Recommended Technical and Essential Employability Competencies Time Sheets

Girls IN2 STEM Internship at Illinois Mathematics and Science Academy

Hours Logged This Week: 0.0

Hours Logged This Month: 0.0

Total Internship Hours: 62.8

My Attendance

DATE	CHECK IN	CHECK OUT	BREAK TIME	TOTAL HOURS	Details
02/19/2020	9:01 AM ✔	4:03 PM ✔	0 Hours 30 Minutes	6 Hours 31 Minutes	▶ Details
02/12/2020	9:01 AM ✔	4:24 PM ✔	0 Hours 24 Minutes	6 Hours 58 Minutes	▶ Details
02/05/2020	8:59 AM ✔	4:01 PM ✔		7 Hours 2 Minutes	▶ Details
01/29/2020	9:00 AM ⋮	⋮			▶ Details
01/15/2020	8:58 AM ⋮	4:11 PM ⋮		7 Hours 12 Minutes	▶ Details
12/11/2019	9:00 AM ✔	4:05 PM ✔	0 Hours 5 Minutes	7 Hours 0 Minutes	▶ Details
12/04/2019	9:00 AM ✔	4:00 PM ✔		7 Hours 0 Minutes	▶ Details
11/20/2019	8:59 AM ⋮	4:26 PM ⋮		7 Hours 26 Minutes	▶ Details
11/13/2019	9:00 AM ✔ ⓘ	4:06 PM ✔ ⓘ		7 Hours 6 Minutes	▶ Details
11/06/2019	9:21 AM ⋮ ⓘ	⋮			▶ Details
10/30/2019	9:33 AM ⋮ ⓘ	4:06 PM ⋮		6 Hours 33 Minutes	▶ Details

There are missing attendance days due to technical difficulties.

