

MD Degree Program Long School of Medicine Interprofessional Education Plan Academic Year 2021-2022

Background

UT Health San Antonio's Strategic Vision for fiscal years 2018-2022 identifies Teamwork & Collaboration as a core value, and it also highlights strengthening interprofessional team-based learning opportunities across the organization as a key strategy. The Quality Enhancement Plan (QEP), *Linking Interprofessional Networks for Collaboration (LINC)*, is an institution-wide effort to advance our Strategic Vision by enhancing interprofessional education (IPE) at UT Health San Antonio. Key measures of success include increasing student knowledge and skills related to IPE, demonstrating schools' and programs' adoption of IPE as a strategic priority through increased activities integrated into programs' curricula, and increasing opportunities for student IPE experiences across the institution. To contribute to the coordinated implementation of the QEP and to demonstrate compliance with program-specific IPE accreditation standards, the Vice Dean for Undergraduate Medical Education is leading the development and implementation of the Long School of Medicine's (LSOM) IPE Plan. In FY21, the LSOM Curriculum Committee approved an IPE Plan proposed by an IPE Task Force, made up of members drawn from the LSOM MD Degree Program. Following approval and implementation of that initial plan in FY21, primary responsibility for reviewing and recommending modifications to the LSOM IPE Plan has shifted to the LSOM Curriculum Committee, particularly its Design & Integration Subcommittee.

Profession-Specific Accreditation Mandate

The Liaison Committee on Medical Education (LCME) requires the integration of IPE into the Doctor of Medicine (M.D.) Degree curriculum, as evidenced by the following standards/expectations:

Element 7.9 Interprofessional Collaborative Skills

The faculty of a medical school ensure that the core curriculum of the medical education program prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients. These curricular experiences include practitioners and/or students from the other health professions.

Doctor of Medicine (M.D.) Degree IPE Plan

In accordance with the Health Professionals Accreditors Collaborative (HPAC), of which the LCME is a founding member, this IPE plan consists of four components: rationale, outcome-based goals, deliberate design, and assessment & evaluation. Details for each component are included below:

Rationale

By designing a program with the goal of developing students who are competent in collaborating as a member of an interprofessional team by the time of graduation, we meet LCME accreditation standard 7.9 (Interprofessional Collaborative Skills) and align with the institution's QEP. The program is built on a framework that incorporates relevant medical education and IPE conceptual frameworks:

Entrustable Professional Activities (EPAs) - Central to the design, delivery, and evaluation of

undergraduate medical education are the "Core Entrustable Professional Activities for Entering Residency" (AAMC 2014). EPAs are defined as "units of professional practice, defined as tasks or responsibilities that trainees are entrusted to perform unsupervised once they have attained sufficient specific competence". Specifically, EPA 9 is "Collaborate as a member of an interprofessional team"

- Physician Competency Reference Set (PCRS) The PCRS is a list of common learner expectations utilized in the training of physicians. It was developed through the Association of American Medical Colleges (AAMC) to provide a common competency framework for the goals and outcomes of medical education, and it is based on the six core competencies within the ACGME framework: patient care, medical knowledge, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice.
- IPEC Competencies The IPEC competencies are designed to identify individual-level interprofessional competencies for health professionals in training, compiled into four core competencies: values/ethics for interprofessional practice, roles/responsibilities, interprofessional communication, teams and teamwork.

Review of the details of each of these frameworks quickly reveals the intersection, overlap, and interplay between them. In order to facilitate design and capture of our IPE activities in ways that are relevant to different stakeholders and constituent groups, we cross-mapped the competencies we are targeting across the three frameworks (see *Table 3. LSOM IPE Strategic Program Goals*).

Outcome-based Goals

The overarching goal of the LSOM IPE Strategic Plan is to create learners who collaborate effectively as members of interprofessional teams by creating and delivering experiences for medical students that develop their knowledge, skills, and attitudes in the following areas: professional roles and responsibilities within health care teams; effective communication in delivery of patient care; and effective teaming and collaboration for patient-centered care.

In order to guide our efforts, we used AAMC EPA 9 ("Collaborate as a member of an interprofessional team") as the anchor, selected most but not all of the "expected behaviors for an entrustable learner" within this EPA, and cross-referenced them with IPEC Competencies, and PCRS domains of competence.

Table 3. LSOM IPE Strategic Program Goals

Expected Behaviors for Entrustable Learner	PCRS Domains of Competence	IPEC Sub-competencies	SOM Sub-competencies
contributions and roles of other health care professionals	IPC 2 - Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of the patients and populations served	VE4 - Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes. RR4 - Explain the roles and responsibilities of other providers and how the team works together to provide care, promote health, and prevent disease.	3.7.7 - List interdisciplinary health services and the role they might play in the management of a given common condition or disorder
the patient and other team members to coordinate care and provide care and provide for seamless care transition	IPC 2 - Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of the patients and populations served SBP 2 - Coordinate patient care within the health care system relevant to one's clinical specialty ICS 3 – Work effectively with others as a member of leader of a health care team or	VE4 - Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes. RR9 - Use unique and complementary abilities of all members of the team to optimize health and patient care. TT1 - Describe the process of team development and the roles and practices of effective teams. TT3 - Engage health and other professionals in shared patient-	3.9.4 - Given a specific clinical situation, demonstrate effective and appropriate communication of medical information to patients, patient family members, other physicians, interdisciplinary team members
	other professional group	centered and population- focused problem-solving.	
bidirectionally to keep team members informed and up to date.	IPC 3 - Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations	CC1 - Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function.	3.9.3 - Demonstrate an understanding of the importance of each of the process elements of effective and appropriate communication of medical information to patients, patient family members, other physicians, and interprofessional team members.
	ICS 2 – Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies P1 – Demonstrate compassion, integrity, and respect for others	CC2 - Communicate information with patients, families, community members, and health team members in a form that is understandable, avoiding discipline-specific terminology when possible. CC4 - Listen actively and encourage ideas and opinions of other team members.	3.9.4 - Given a specific clinical situation, demonstrate effective and appropriate communication of medical information to patients, patient family members, other physicians, interdisciplinary team members.

4. Tailor communication	ICS 2 – Communicate effectively with	CC1 - Choose effective communication tools and techniques,	3.9.3 - Demonstrate an understanding of the
strategy to the situation.	colleagues within one's profession or	including information systems and communication	importance of each of the process elements of
	specialty, other health professionals, and	technologies, to facilitate discussions and interactions that	effective and appropriate communication of
	health-related agencies	enhance team function.	medical information to patients, patient family
			members, other physicians, and interprofessional
	ICS 7 - Demonstrate insight and	CC2 - Communicate information with patients, families,	team members.
	understanding about emotions and human	community members, and health team members in a form	
	responses to emotions that allow one to		3.9.4 - Given a specific clinical situation,
	develop and manage interpersonal	terminology when possible.	demonstrate effective and appropriate
	interactions		communication of medical information to
			patients, patient family members, other
	IPC 3 - Communicate with other health	difficult situation, crucial conversation, or conflict.	physicians, interdisciplinary team members.
	professionals in a responsive and responsible		
	manner that supports the maintenance of		
	health and the treatment of disease in		
	individual patients and populations		
5. Support other team		VE6 - Develop a trusting relationship with patients, families,	1.3.2 - Demonstrate an understanding of the
members and	respect for others	and other team members	importance of behaviors indicative of respect for
communicate their value			human dignity.
to the patient and	IPC 1 - Work with other health professionals	CC7 - Recognize how one's uniqueness (experience level,	
family.	to establish and maintain a climate of mutual		1.3.3 - Behave in a manner indicative of respect
	respect, dignity, diversity, ethical integrity,	team) contributes to effective communication, conflict	for human dignity.
	and trust	resolution, and positive interprofessional working	
		relationships (University of Toronto, 2008).	1.5.2 - Behave in a manner consistent with the
			institutional and professional codes of conduct.
			3.7.7 - List interdisciplinary health services and the
			role they might play in the management of a given
			common condition or disorder
6. Anticipate, read, and	P1 – Demonstrate compassion, integrity, and	CC4 - Listen actively and encourage ideas and opinions of	1.3.2 - Demonstrate an understanding of the
react to emotions to	respect for others	other team members.	importance of behaviors indicative of respect for
gain and maintain			human dignity.
therapeutic alliances	ICS 7 - Demonstrate insight and	CC6 - Use respectful language appropriate for a given difficult	
with others.	understanding about emotions and human	situation, crucial conversation, or conflict.	1.3.3 - Behave in a manner indicative of respect
	responses to emotions that allow one to		for human dignity.
	develop and manage interpersonal	TT8 - Reflect on individual and team performance for	1.5.2 - Behave in a manner consistent with the
	interactions	individual, as well as team, performance improvement.	institutional and professional codes of conduct.
		, 22 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	and processions could be confident.
	IPC 1 - Work with other health professionals		
	to establish and maintain a climate of mutual		
	respect, dignity, diversity, ethical integrity,		
	and trust		

This process revealed that our desired entrustable behaviors and PCRS competency domains align with 12 IPEC sub-competencies. We compiled a list of relevant LSOM didactic, co-curricular, and clinical IPE activities and classified the activities as either didactic IPE, clinical IPE, or co-curricular IPE¹. Next, we mapped the activities by both phase of curriculum (pre-clinical/clinical and semester) and by alignment of learning objectives to the 12 aligned IPEC sub-competencies. A visual summary of our findings is demonstrated in Table 4.

Table 4. LSOM Current IPE activities and IPEC competencies

Program Year & Semester	Values/Ethics for Interprofessional Practice (VE)	Roles/Responsibilities (RR)	Interprofessional Communication (CC)	Teams and Teamwork (TT)
Year 1 Fall	VE4ª, VE6	RR4, RR9	CCI, CC2, CC4, CC6, CC7	TT1, TT3
Year 1 Spring	VE4, VE6	RR4	CCI, CC2, CC4, CC6, CC7	TT3
Year 2 Fall	VE4, VE6	RR4, RR9	CCI, CC2, CC4, CC6, CC7	TT3, TT8
Year 2 Spring				
Year 3 ^b Fall	VE4, VE6	RR4, RR9	CCI, CC2, CC4, CC6, CC7	TT1, TT3, TT8
Year 3 Spring	VE4, VE6	RR4, RR9	CCI, CC2, CC4, CC6, CC7	TT1, TT3, TT8
Year 4 Fall				
Year 4 Spring				

^a Bolded IPEC sub-competencies occur two or more times in the semester

The IPE Task Force/Design & Integration Subcommittee reviewed the alignment (Table 3), curricular mapping (Table 4) processes, and the outcomes from the AY 2020-2021 strategic plan (see LSOM 2020-2021 Annual Report on Interprofessional Education Curricular Activities) to make the following conclusions and recommendations that have informed our deliberate design:

- The D&I Subcommittee determined that the Module and Clerkship Directors, as well as the UME leadership should be commended for successfully starting the IPE initiative despite the limitations imposed by the pandemic.
- 2. The D&I Subcommittee felt that the selected IPEC sub-competencies were adequately covered by the planned sessions.
- 3. Much of the data is limited and based on student perceptions. The D&I Subcommittee determined that it was appropriate to continue with the current programs and continue to gather data to determine their effectiveness.
- 4. It was noted that the conversion to virtual sessions interfered with the implementation and delivery of some of the planned sessions. This led to decreased student satisfaction with one of the sessions. This has been explored by the UME educational team and module leadership, and the session is being adjusted. This plan was supported by the D&I Subcommittee, which will continue to monitor the process.

^b Fall of year 3 is the approximate demarcation between preclinical and clinical curricular phases

Deliberate Design

Our evaluation of AY 2020-2021 IPE activities revealed four key findings.

Key finding #1 recognizes the efforts put forth to successfully execute the IPE activities during an academic year in which COVID-19 presented logistical challenges. Despite those challenges, key finding #2 suggests that the IPE plan and its activities adequately cover the LSOM IPEC sub-competencies.

Based on key findings #3 and #4, the IPE Task Force/D&I Subcommittee recommended to the full LSOM Curriculum Committee that the IPE activities as outlined in the AY 2020-2021 IPE Strategic Plan should be carried forward as the foundation of this academic year's 2021-2022 IPE Plan with the addition of new IPE activities in the clinical (Clerkship) phase of the curriculum (see Table 5). The LSOM Curriculum Committee approved this recommendation at its August 2021 meeting.

Table 5. LSOM Proposed IPE activities for AY 2021-2022

Program Year & Semester	IPE Activities (Type)	Associated Course/Place in Curriculum	Faculty Leader(s)	Approximate Time To Be Completed (Month)
	LINC Common IPE Experience Module #1 Didactic IPE – e-Learning	e-Learning module as program requirement	LINC Didactic IPE Initiative Members: Meredith Quinene (SHP-PAS), Bobby Belarmino (SHP-PT), Kelly Lemke (SOD), Daniel Saenz (GSBS), Sadie Trammell Velasquez (LSOM), and Cynthia L. Wall (SON), with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Gretchel Gealogo (SON), Keith Krolick (GSBS), Temple Ratcliffe (LSOM), Joseph Zorek (LINC Director)	September- October
Year 1 Fall	LINC Common IPE Experience Module #2 Didactic IPE – e-Learning	e-Learning module as program requirement	LINC Didactic IPE Initiative Members: Meredith Quinene (SHP-PAS), Bobby Belarmino (SHP-PT), Kelly Lemke (SOD), Daniel Saenz (GSBS), Sadie Trammell Velasquez (LSOM), and Cynthia L. Wall (SON), with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Gretchel Gealogo (SON), Keith Krolick (GSBS), Temple Ratcliffe (LSOM), Joseph Zorek (LINC Director)	September- October
	LINC Common IPE Experience Module #3 Didactic IPE – e-Learning	e-Learning module as program requirement	LINC Didactic IPE Initiative Members: Meredith Quinene (SHP-PAS), Bobby Belarmino (SHP-PT), Kelly Lemke (SOD), Daniel Saenz (GSBS), Sadie Trammell Velasquez (LSOM), and Cynthia L. Wall (SON), with support from the LINC Faculty Council Members: Moshtagh Farokhi (SOD), Gretchel Gealogo (SON), Keith Krolick (GSBS), Temple Ratcliffe (LSOM), Joseph Zorek (LINC Director)	September- October
	Interprofessional Education: The role of Physical Therapy (didactic IPE – classroom)	CIRC 5007: Molecules to Medicine	Liz Hanson (LSOM); Martha Acosta (SHP-PT)	August
	General Appearance /Vital Signs Laboratory (didactic IPE – simulation)	CIRC 5005: Clinical Skills	Cristina Grijalva (LSOM); Sadie Trammell-Velasquez (LSOM); Lark Ford (SON)	August
	HENT to HENOT Laboratory: Integrating Medicine and Dentistry (didactic IPE – classroom)	CIRC 5005: Clinical Skills	Cristina Grijalva (LSOM); Sadie Trammell-Velasquez (LSOM); David Ojeda (SOD)	September
	Interprofessional Education: Partnering with Medical Laboratory Sciences (didactic IPE – classroom)	CIRC 5009: Attack & Defense	Steven Dallas (UHS); JD Canty (LSOM); Michael Berton (LSOM); Cordy Kudika (SHP-MLS); Gerardo Ramos (SHP-MLS); Terri Murphy-Sanchez (SHP-MLS)	November
Year 1 Spring	Interprofessional Panel: Respiratory Therapy (didactic IPE – classroom)	CIRC 5013: Respiratory Health	Dr. Svatek (LSOM); Dr. Restrepo (SHP-RT)	February
Year 2 Fall	Interprofessional Ethics & Communication Workshop (didactic IPE – classroom)	CIRC 5001: Medicine, Behavior and Society-6	Jason Morrow (LSOM); Bridget Piernik-Yoder (SHP-OT)	September
	Longitudinal IPE: Integrating Medicine and Dentistry (didactic IPE - simulation)	CIRC 5005: Clinical Skills	Cristina Grijalva (LSOM); Sadie Trammell-Velasquez (LSOM); David Ojeda (SOD)	December

Year 3	Clinical Clerkships (didactic and clinical IPE) Didactic IPE – Modules on teams and teamwork (e.g., AMA Health Systems Science) Clinical IPE – Reflective writing assignments exploring participation in designated interprofessional collaborative practice (IPCP) experience		Clerkship Directors	July – June
	Psychiatry IPE Experience* Student observation of IPE Team	Psychiatry Clerkship	Kimberly Benavente (Psychiatry Clerkship Director)	July-June
		Family Medicine Clerkship	Nehman Andry (Family Medicine Clerkship Director)	July-June
Year 3 Fall	The Clinical Learning Environment* (didactic IPE – classroom)	TEAM CARE: Longitudinal Curriculum	Temple Ratcliffe; Megan Freeman (Internal Medicine Clerkship Hosts)	July
	Quality Improvement & Patient Safety* (didactic IPE – classroom)	TEAM CARE: Longitudinal Curriculum	Jean Petershack (Pediatrics Clerkship Host)	November
	Transitions of Care* (didactic IPE classroom)	TEAM CARE: Longitudinal Curriculum	Deborah Carver (Neurology Clerkship Host)	December

The World Health Organization's definition of IPE, which is endorsed by IPEC, is "When students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes" (WHO, 2010; IPEC, 2016). This emphasis on students aligns well with UT Health San Antonio's QEP, and the expectation is that student-to-student interprofessional learning will constitute the majority of IPE activities on campus. That said, HPAC provided guidance that offers an expanded interpretation of "from" and "with" highlighting the importance of student learning that takes place from and/or with practitioners or professionals (HPAC, 2019). Student-to-practitioner and/or student-to-professional IPE should be included in this table if it exists in the program.

Didactic IPE = IPE activities that take place in classroom and simulation settings as part of formal curricula (i.e., credit-bearing coursework); **Co-Curricular IPE** = IPE activities that take place outside of formal curricula (volunteer experiences that augment learning/professional development); **Clinical IPE** = IPE activities that take place in clinical settings as part of formal curricula (i.e., credit-bearing coursework).

IPE Partners = Students from other professions/programs involved including their year(s) of study

Assessment and Evaluation

The LSOM IPE assessment and evaluation plan is designed to assess learners on their development and mastery of interprofessional collaborative practice competencies and evaluate the implementation and immediate impact of the IPE plan.

Learner Assessment: All students are assessed three times over the course of their academic program by the LINC Assessment Council following the LINC Core IPE Measurement Plan. The LINC Core IPE Measurement Plan will measure learning outcomes on the modified Kirkpatrick Model Level 1 (reaction), level 2a (attitudes/perceptions), level 2b (knowledge/skills), and level 3 (collaborative behavior) as a student moves through medical school.

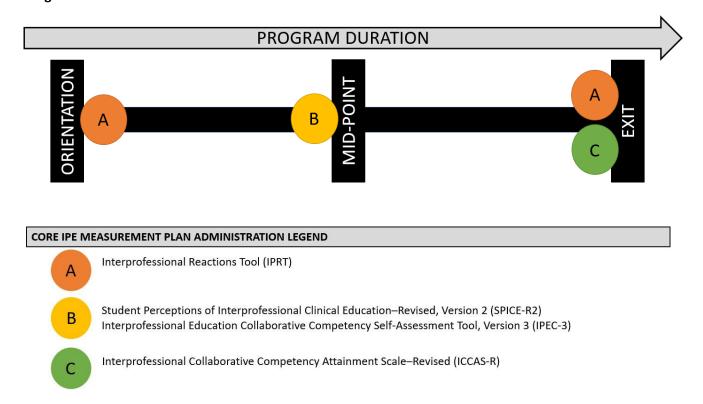
Table 3. Tools and Targeted Learning Outcomes of the LINC Core IPE Measurement Plan

Level*	Measurement Tool**	Constructs	Items
Level 1 Reaction	Interprofessional Reactions Tool (IPRT)	PreparationRelevanceImportanceSatisfaction	 13 self-reported items: 9 quantitative items using a 5-point Likert-type response scale; and, 4 qualitative items soliciting written responses to open-ended prompts
Level 2a Attitudes/ Perceptions Level 2b Skills	Student Perceptions of Interprofessional Clinical Education—Revised, Version 2 (SPICE-R2) Interprofessional Education Collaborative	 Interprofessional Teamwork and Team-based Practice Roles & Responsibilities for Collaborative Practice Patient Outcomes from Collaborative Practice Interprofessional Interactions Interprofessional Values 	10 self-reported, quantitative items using a 5-point Likert-type response scale 16 self-reported, quantitative items using a 5-point Likert-type response
Level 3 Behaviors	Competency Self- Assessment Tool, Version 3 (IPEC-3) Interprofessional Collaborative Competency Attainment Scale—Revised (ICCAS-R)	 Communication Collaboration Roles & Responsibilities Collaborative patient-family centered approach Conflict management/resolution Team functioning 	21 self-reported, quantitative items using a 5-point Likert-type response scale

^{*} Modified Kirkpatrick levels 2b (skills) and 3 (behaviors) are combined in this table because IPEC-3 and ICCAS-R report to measure both levels

^{**} See Appendices I-IV for complete versions of selected measurement tools

Figure 2. Administration Schedule of the Core IPE Measurement Plan



Additional assessments are used to enhance understanding of student changes in attitudes and perceptions of other professions, the acquisition of interprofessional collaborative practice knowledge and skills, and the demonstration of behaviors in training and/or practice setting.

LSOM Assessment Plan

LSOM Selected IPEC Subcompetencies	Assessment Item	KirkpatrickLevel
VE4 - Respect the unique cultures, values,	Participation (Course Evaluation)	Level 1
roles/responsibilities, and expertise of other health	CCCE-9	Level 3
professions and the impact these factors can have on	CCCE-10.3	Level 3
health outcomes. (3.7.7, 3.9.4)	CCCE-10.7	Level 3
VE6-Developatrusting relationship with patients,	Participation (Course Evaluation)	Level 1
families, and other team members (1.3.2, 1.3.3, 1.5.2,	CCCE-8	Level 3
3.7.7)	CCCE-9	Level 3
3.7.7)	CCCE-10.1	Level 3
RR4 - Explain the roles and responsibilities of other	Participation (Course Evaluation)	Level 1
providers and how the team works together to provide	MBS Exam Items	Level 2b
care, promote health, and prevent disease. (3.7.7)	Reflection Writing Assignment	Level 2b
RR9 - Use unique and complementary abilities of all	Participation (Course Evaluation)	Level 1
members of the team to optimize health and patient	CCCE-9	Level 3
care. (3.9.4)		
CC1 - Choose effective communication tools and	Participation (Course Evaluation)	Level 1
techniques, including information systems and	CCCE-9	Level 3

communication technologies, to facilitate discussions		
and interactions that enhance team function. (3.9.3, 3.9.4)		
,	CCCE-8	Level 1 Level 3 Level 3
CC4 - Listen actively, and encourage ideas and opinions		Level 1 Level 3
CC6 - Use respectful language appropriate for a given difficult situation, crucial conversation, or conflict. (1.3.2, 1.3.3, 1.5.2, 3.9.3, 3.9.4)		Level 1 Level 3
CC7 - Recognize how one's uniqueness (experience level, expertise, culture, power, and hierarchy within the health team) contributes to effective communication, conflict resolution, and positive interprofessional working relationships (University of Toronto, 2008). (1.3.2, 1.3.3, 1.5.2)	Reflection Writing Assignment CCCE-10.3	Level 1 Level 2b Level 3 Level 3
TT1 - Describe the process of team development and the roles and practices of effective teams. (3.9.4)	MBS Exam Items	Level 1 Level 2b Level 2a, 2b
TT3-Engage health and other professionals in shared patient-centered and population-focused problemsolving. (3.9.4)	Participation (Course Evaluation) Reflection Writing Assignment CCCE-9	Level 1 Level 2a Level 3
TT8 - Reflect on individual and team performance for individual, as well as team, performance improvement. (1.3.2, 1.3.3, 1.5.2)	Reflection Writing Assignment	Level 1 Level 2a Level 3

IPE Plan Evaluation: The evaluation of the IPE plan implementation and its immediate impact represent a multi-prong approach to include the following sources: learner assessment data collected through the Core IPE Measurement Plan and LSOM student performance assessments, IPE plan stakeholder feedback, and observations.

Approved by LSOM Curriculum Committee on September 16, 2021 Submitted to LINC on September 17, 2021