

Experiential Component Requirements

Requirements common for all experiences

1. Submit an experiential proposal identifying what aspects of the experiential rubric will be tackled
2. For projects involving multiple TIC students, each student should enumerate what unique contribution from the rubrics will be tackled. **Students must submit proposals as a package, calling out the responsibilities of each collaborator in a collaboration plan (template) associated with each submission.**
3. Do the background work supporting the proposed work (e.g., collecting data for customer or market needs assessment, etc.)
4. Produce the presentation (PPT) in draft form prior to the due date.
5. Produce a final presentation (PPT) based on the feedback from the draft presentation review
6. [Senior Design] Integrate the pitch into Sr. Design materials for the group effort (reports and presentation)

TISP-specific requirements

1. As of 10/1/2018 TISP will no longer count as a TIC experience. Exceptions will be made for any pre-existing TIC student with declaration on file before 10/1/2018.

Startup event-specific requirements

1. Discuss the scope and engagement of the startup event with the TIC coordinator in advance of the event
2. Submit an experiential proposal identifying what aspects of the experiential rubric are anticipated to be tackled and why the event is relevant to the TIC
3. Actively participate in the event. Sitting in the audience does not qualify.
4. Capture artifacts from the event (PPT, photos, sketches, mockups, etc.) and organize these into the draft presentation prior to the due date
5. Produce a final presentation (PPT) based on the feedback from the draft presentation review

Reporting Requirements (all)

The TIC experience reporting is comprised of a PowerPoint or equivalent presentation and oral delivery recorded as video and submitted electronically. Requirements for reporting:

1. Presentation deck of a minimum of 10 slides and a maximum of 20 slides
2. Presentations **should not be a reiteration of a technical project**, but should focus on elements selected from the rubric
3. Video recording limited to 5 minutes.
4. A draft presentation is required which will be reviewed against the rubric
5. Final presentation, including the video recording, is due based on feedback from draft review
6. The slide deck comprises the written summary of the TIC experience

Proposal Guidelines

Senior Design Proposal Guidelines

1. A **word template** for experiential proposals is provided
2. Statement that proposes what you plan to do: E.g., "I propose to use my senior design project as a basis for my Technology Innovation Concentration Experience."
3. One paragraph about the senior design project concept and proposal. Tell us about the concept and why it benefits from at TIC experience addition
4. One paragraph describing how you will interact with your senior design team members, who they are, and if they support your efforts to use the project for the TIC experience.
5. Call out your unique contribution if there are multiple people using the project for the TIC experience (use the Multiple Collaborator spreadsheet to report who owns what).
6. Describe what you propose to do in addition to the senior design technical project. For example:
 - a. What research do you plan to do on market assessment?
 - b. What research do you plan to do on customer needs assessment?
 - c. What tools will you use for cost and value quantification?
7. State your deliverables including financial forecast and timeline, investor pitch slide deck, and anything else – business canvas, customer/market data, etc. **Do not provide technical deliverables here – only TIC deliverables.**
8. State how the deliverables will be integrated into the senior design team effort
9. Describe prescribed milestones:
 - a. Draft TIC deck or portfolio
 - b. Final TIC deck or portfolio
 - c. Video recording of TIC presentation
 - d. Date of senior design presentation

Internship Proposal Guidelines

1. A **word template** for experiential proposals is provided
2. Statement that proposes what you plan to do: E.g., "I propose to use an internship as a basis for my Technology Innovation Concentration Experience."
3. One paragraph about the internship or work experience. Tell us about the position/role and why it can be justified as satisfying the elements espoused by TIC. Alternatively, how you will add TIC elements to the activity.
4. One paragraph describing how you will interact with your colleagues on the project or experience and if they support your efforts to use the project or position for the TIC experience.
5. Describe what you propose to do in the internship that addresses TIC components. For example:
 - a. What research do you plan to do on market assessment?
 - b. What research do you plan to do on customer needs assessment?
 - c. What tools will you use for cost and value quantification?
10. State your deliverables, for example, financial forecast and timeline, investor pitch slide deck, business canvas, customer/market data, etc. **Do not provide technical deliverables here – only TIC deliverables.**
6. Describe milestones:
 - a. Draft TIC deck or portfolio
 - b. Final TIC deck or portfolio
 - c. Video recording of TIC presentation

TIC Experience and Confidentiality Issues

Applies to internships, lab research experiences, startups, or any situation where the work may require participating in a nondisclosure agreement.

1. Students should, at the outset, be clear with their employers that the job experience will be used to satisfy the experiential requirement.

2. Experiences involving confidentiality agreements or IP agreements are not exempt from the TIC Experiential reporting requirements.
3. Students should plan for, and prepare reports (summary and presentation deck) to provide sufficient detail to be evaluated against the TIC experience rubric.
4. In these cases, the materials delivered to the TIC Coordinator can be 'sanitized' to prevent disclosure of confidential details; however, the reporting must include sufficient detail to demonstrate innovation and entrepreneurial activities undertaken during the experience.
5. Please consult the TIC Experience Rubric prior to embarking on the TIC experience.

Multiple Collaborator Template

TIC Effort Breakdown for Multiple Collaborators L -- Lead on Task; P -- Participant on Task **THIS IS AN EXAMPLE. FILL IN YOUR OWN TOPICS**

Category (not exhaustive)	Task	Betts	Martinez	Benintendi	...
1. Customer Needs Assessment	Task 1	L	P		
1. Customer Needs Assessment	Task 2	L	P	P	
1. Customer Needs Assessment	Task 3	L		P	
2. Market Assessment	Task 1	P	L		
2. Market Assessment	Task 2	P	L		
2. Market Assessment	Task 3	P	L		
3. Cost and Value Quantification	Task 1			L	
3. Cost and Value Quantification	Task 2			L	
3. Cost and Value Quantification	Task 3			L	
4. Financial Forecast	Task 1	L	P	P	
4. Financial Forecast	Task 2		L		
4. Financial Forecast	Task 3	P		L	
4. Financial Forecast	Task 4	L	P	P	

TIC Rubric

		To a large extent					Not at all		Rating	Comments
	5	4	3	2	1					
Teaming	To what extent does the report demonstrate the ability to: <i>Collaborate as member or leader of a project team.</i>	A team leader inspiring a group to excel; or a cooperative member of a successful team.	Shows leadership potential, able to successfully drive a team; or able to contribute in a team without conflict	Member of a functional team; able to work with others with some degree of collaboration. Successful but not optimal	Part of a mixed team with some dysfunction due to uncoordinated interests. Unable to rally as a team member or leader.	Uncooperative as team member; or otherwise toxic to team goals				
Customer Needs Assessment	<i>Summarize background research customer need data in a concise and convincing way.</i>	Demonstrates mastery of customer data collection to validate product or service need. Talked to customers directly	Performed customer survey with own independent research, but not completely distilled.	Pulled data from corporate slide deck and massaged it. Or solely relied on google search	Made an effort to include customer or market data, but lacks reference or depth	No customer needs assessment provided				
Market Assessment	<i>Summarize background research on market and competitor data in a concise and convincing way.</i>	Demonstrates mastery of market and competitor data collection to validate product or service value	Performed market analysis with own independent research, but not completely distilled.	Pulled data from corporate slide deck and massaged it. Or solely relied on google search	Made an effort to include customer or market data, but lacks reference or depth	No market needs assessment provided				
Communication	<i>Present complex technical concepts to a general audience that direct towards business-focused outcomes.</i>	Exhibits mature, independent thinking. Demonstrates command and authority over the material. Articulate in oral and written communications.	Shows understanding and mastery of subject matter and demonstrates with oral and written communications	Adequately presents ideas. Satisfactory in communicating subject matter.	Provides a coherent response with some logic gaps or inconsistencies.	Unable to articulate an argument or lack of language mastery.				
Societal Impact	<i>Describe important societal problems and alternative approaches in the context of current technology capabilities.</i>	Shows motivating evidence of clear societal impact and implications of work product on market, environment and society	Some evidence provided to motivate value of engineering product and it's implications. Potential not fully realized	Knows that the engineering product has value and describes the work in expected terms; little insight or data to support claims.	Alludes to possible benefits but without any supporting evidence.	Focus entirely on the technology with no aspect of its utility or impact				
Cost and Value Quantification	<i>Relate engineering cost to customer value; defining value in terms of quantified financial impact vs. recurring and non-recurring engineering costs.</i>	Demonstrates analysis of engineering costs in context including assumptions and risks; shows value derived from quantified assessment of impact. References cost and value sources.	Connected story of engineering costs and business value. Some gaps or missing timeline.	Provides cost and value estimates with dubious credibility or reference.	Cost estimates are dubious or without basis or derivation. Similar gaps in value calculations	No demonstration of value in financial terms. No cost estimates.				
Financial Forecast	<i>Show a revenue and cost forecast over 5 years for the product or concept proposed.</i>	Shows revenue and cost business case over timeline of at least 5 years (graphic), hockey stick	Strong story, but lacks convincing data. Borderline funding of concept. Try harder	Shows graphic with revenue and income, but no hockey stick.	Missing one of cost or revenue projection.	No timeline or financial information presented				
Investment Decision	<i>Identify a unique and sustainable business case or model, worthy of investment with real dollars.</i>	Demonstrates a novel idea with quantified impact, "must fund"	A strong idea with reasonable evidence to support funding. Weak in one or more aspects of a complete pitch.	Reasonable idea but lacks convincing evidence or impact. Ok, but not compelling	Makes arguments for business case and costs, but impact is marginal/not worth funding.	Not convincing/would not fund				