



# Strategically Improving Employer Engagement Through the BILT Model

# Good Morning!

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# Morning Schedule

10:00 am-12:15 pm	Setting the Context BILT 101 Hands-on activities
12:15 pm - 12:45 pm	Lunch
12:45 pm - 1:30 pm	Panel

# Consider Your Current Business Advisory Committees (BAC)

Are you getting what you need from your businesses to ensure your programs produce job-ready graduates who are ready for the workforce when they graduate? How do you know?

How often do your BACs meet?

How interactive is the agenda? How much is focused on listening the employer future need?

How often do your BACs meet?

Is the meeting mostly discussion?

How often are your BAC members involved with faculty and/or students outside of the BAC meetings?

How long do your BAC members serve?

Are the current BAC members truly subject matter experts?

# BILT 101

ORIENTATION TO THE MODEL



**BUSINESS &  
INDUSTRY  
LEADERSHIP  
TEAM**

**BILT**



**CORD**  
*Leading Change  
in Education*







## What is it?



1. A Business Advisory Council “**on steroids**”
2. A **structured, repeatable process** that can be used for any technical program
3. A model that puts employers in a **co-leadership role** that greatly increases their engagement with your program



## Business & Industry Leadership Team Model



1. A Business Advisory Council  
**“on steroids”**
2. A **structured, repeatable process** that can be used for any technical program
3. A model that puts employers in a **co-leadership role** that greatly increases their engagement with your program







NATIONAL  
CONVERGENCE  
TECHNOLOGY CENTER



PATHWAYS TO  
INNOVATION

## Roots of BILT Model

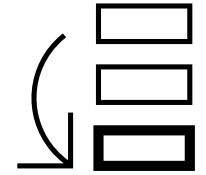
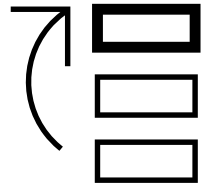
National Science Foundation (NSF) supported National Convergence Technology Center Based at Collin College (TX) [2012-2023]

Established BILT model through work with business leaders from across the nation to determine the **Knowledge, Skills, and Abilities** that “workforce ready” graduates will need

Model implemented at more than **100 colleges** in **multiple disciplines**.

US DOL and ED recognize BILT as a leading model for strategic employer engagement

Pathways to Innovation project launched **BILT Academy** to scale the model



FREQUENCY

SPECIFICITY

DEPTH OF INPUT

INDUSTRY-LED



## BILT Essential Roles

### *Businesses co-lead programs:*

- Annually prioritize Knowledge, Skills and Abilities (KSAs) they want graduates to have 12-36 months into the future (at a program level)
  - Structured, repeatable voting process
  - Synchronous discussion
  - Predict Labor Market Demand
- Identify industry trends during 2-3 other meetings annually

### *Faculty:*

- Attend KSA mtg as active listeners and questioners
- Cross reference prioritized KSAs to existing curriculum to determine gaps and coverage
- Diligently try to update curriculum to address KSAs needed by businesses
- Provide businesses with feedback regarding implementation and discuss challenges



## ESSENTIAL ELEMENT: *Co-Leadership*

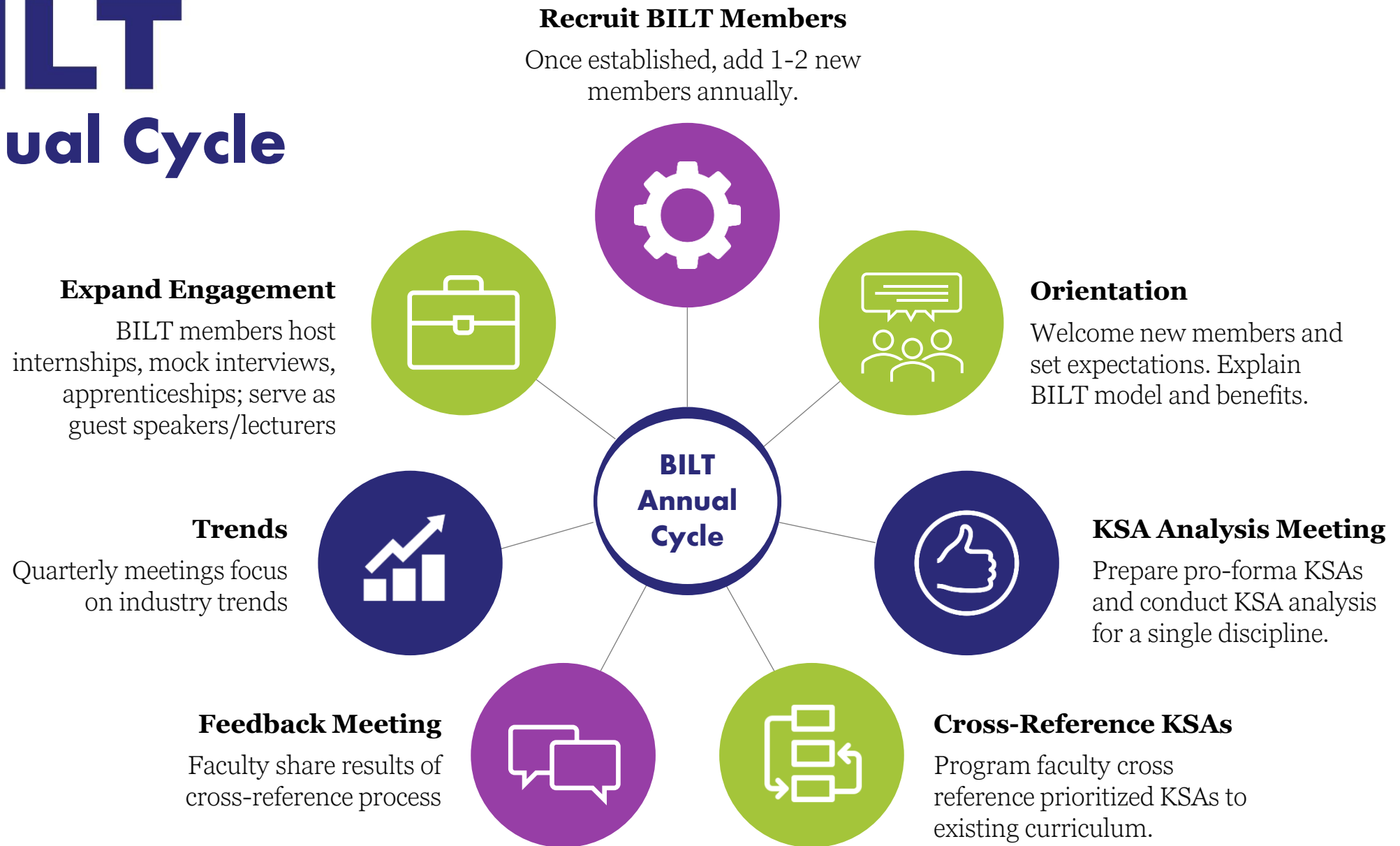
Employers report they are more likely to hire graduates from programs for which they have **curricular leadership** responsibility

Employers report they will assume this role (and more) if:

- Their time is respected
- There is a method for ensuring their input is consistently and seriously considered by faculty members
- They consistently receive feedback on their recommendations

# BILT

## Annual Cycle







HOW **BILT** BENEFITS  
STUDENTS, FACULTY,  
AND EMPLOYERS



# Benefit to Students



- Because BILT members feel ownership of courses, certificates, and degrees, they're likely to seek your graduates
- BILT members are engaged; students in the program are first to be considered for opportunities such as internships, even before they complete
- BILT members mentor students
- BILT members help with events, interview skills, perspectives on "a day in the life," etc.

# Benefit to Faculty



- Faculty have assurance they are teaching what businesses want
- BILT members serve as guest speakers and assist with recruitment events, on-campus and off
- BILT members alert faculty of trends in time for curriculum adjustment
- BILT members often provide free or reduced-cost professional development for faculty
- BILT members often provide externships

# Benefit to Employers



- Their pipeline of “workforce ready” job candidates is increased
- They develop professional relationships with other BILT members and with the college
- They’re able to give back to their community in a way that makes a real difference
- They know their time is valued

# The Value of BILT

- Foster partnerships between industry and higher education
- Focus curriculum efforts to target the right skills
- Gauge the value of industry certifications
- Industry forecasting informs the direction of your program(s)
- Members take an active role when they feel invested



**Business &  
Industry  
Leadership  
Team**

For Advanced Manufacturing



# Developing the Talent Pipeline

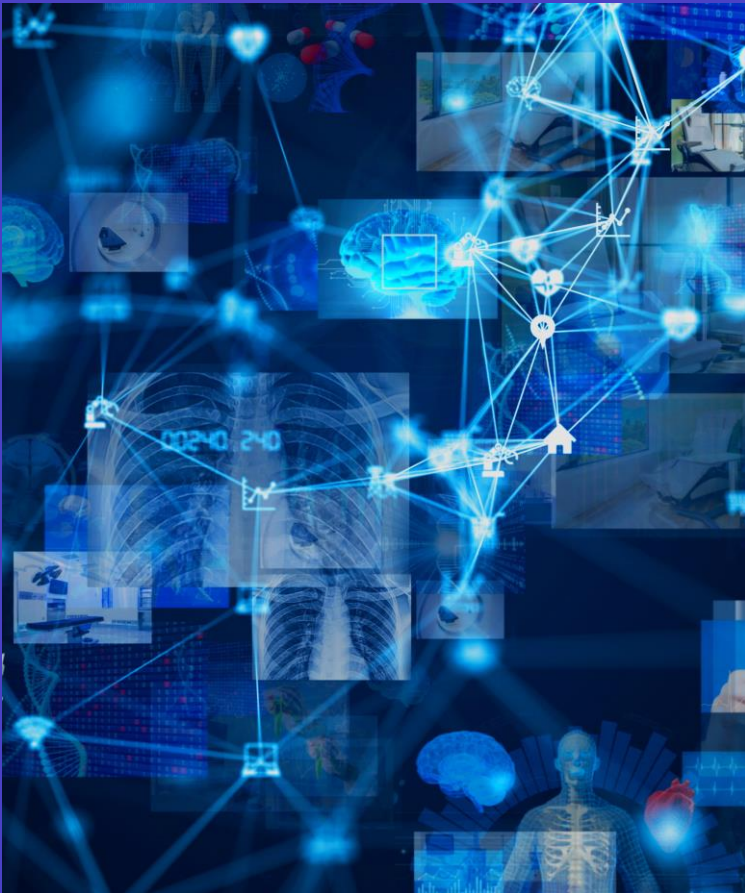
**leap** Learn & Earn  
Apprenticeship  
Program  
@ForsythTech



Industry leaders and college faculty collaborate to give middle and high school students exposure to the field of engineering and manufacturing. Students learn about academic pathways that lead to careers through hands-on exploration.



# CROWDER COLLEGE



- Apprenticeship agreement with Freeman Health Systems is direct result of BILT engagement with Crowder's Certified Medical Assistant Program
- Agreement supports 20 apprentices per year for five years
- Prior to BILT implementation, Freeman was not interested in working with Crowder College







# EnTec

**MIAMI DADE COLLEGE**  
**SCHOOL OF ENGINEERING**  
**+ TECHNOLOGY**

## Four BILT Teams So Far

- Cybersecurity BILT drove build of AS and BS in Cyber that now has over 600 enrollees and massive demand
- Cloud BILT guided development of AS and BS that were recently approved
- Data Analytics program was already established, and BILT work is in progress to ensure responsiveness of MDC programs
- Artificial Intelligence BILT led development of employer-responsive AS and BS that has been approved by the State of FL in record time

# *Dallas and Collin Colleges-EDA grant collaboration*

- Grant awarded September 2022--North Texas Biotech Workforce Development Collaborative, used the BILT model to align program curriculum in Biotechnology with employer demand in our area
- We were trying to organize 4 educational institutions and 2 industry advocacy groups to develop programs; hiring, meeting etc.—that goes with getting started on a grant
  - Applications for BILT Cohort 3 opened and seemed like the perfect opportunity to reach goal
- Designed a 6-8-week training program which included the highest ranked knowledge and skills identified by our industry team
- We did a gap analysis of the curriculum currently being used
- Supplemented with additional curriculum to fill the gaps
- Got feedback from industry team about the schedule and curriculum
- Are currently teaching the course at Collin; Dallas College began in October

# *Dallas and Collin Colleges-EDA grant collaboration*

- The BILT model allowed us to reach our goals by:
- Keeping us on track!!
- Guiding us on organizing an industry team
- Coaching us to navigate the competing objectives within our grant group
  - They presented to the grant group to help them understand the BILT process and to the industry group
- Guiding us through the process of organizing Orientation and KSA meetings (lots of details and reminders)
- Getting employer input about needed KSAs
- Helping us complete the gap analysis to get the curriculum together

# What Did You Hear?



# BILT Members



- **BILT Members are:**
- Qualified as subject matter experts for your program
- Dedicated to co-leading
- Have a WIIFM that is addressed
- *TIP: Recruit enough to have a minimum of 8-10 members at your meetings*





# Composition of BILT

*Companies are representative of those who hire your grads*

- High-level technical executives
- First-line hiring managers
- Technicians
- HR execs, usually not the sole rep for a company
- Faculty are ex-officio; they *listen* and ask questions





# Diversity among BILT Members

- Highly desirable for the companies to hire Associate level students and be local/regional
- Consider diversity measures such as gender, ethnicity, etc.
- Various types and sizes of companies
- Types of jobs within those companies, both now and in the future
- Desirable to have BILT members able to predict future needs
- Do NOT fire existing BAC members



## Remember your value proposition, and use it to invite at least 3 potential BILT members to attend your orientation meeting (This IS your Orientation Script)

- We at (your college name) want to align a program in (program name) with employer demand in our area, and we are adopting the **Business & Industry Leadership Team (BILT) Model** for our advisory council. The BILT is a proven model that puts area employers in a co-leadership role for our programs.
- We invite (business rep name or their company) to become part of our BILT team to guide our curriculum so that the knowledge and skills of our graduates better-align with your needs for job candidates.
- Could you join us for a virtual orientation session in February or March (date TBD) to learn more about our BILT and how your participation may be beneficial? We will meet no longer than an hour.

## Inviting BILT Members (Elevator Pitch)

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Start Early!

Spend 5 minutes focusing on one program and make a list of potential new BILT companies and the person you want to recruit, if possible

Then, practice recruiting BILT members with a neighbor with the neighbor asking challenging questions

How could you change your elevator pitch into an email invitation?

## Activity



# THE KSA ANALYSIS

# Background/Context

- Created by NSF ATE Convergence Technology Center
- Uses PCAL7 (Performance Criteria AnaLysis) process developed by US Air Force
- Prioritizes the Knowledge, Skills, and Abilities (KSAs) businesses will need in entry-level workers 12-36 months into the future
- Consensus is not the goal
- Results of prioritization help faculty align curriculum to workforce needs



# Uses a Pro Forma List of KSAs

Employers talk in terms of Knowledge, Skills, and Abilities, not student learning outcomes or competencies

A pro forma list needs to be 50-70% correct (This is why the meeting can gain such granular information in such a short time period)

Usually 80-120 items - otherwise BILT members will have survey fatigue

Abilities for many jobs are often considered separately in another meeting because abilities may be more like employability skills

# Roles

- **Industry Subject Matter Experts**
  - Participate in validation ratings and discussion
- **Faculty Subject Matter Experts**
  - Attend as *observers* (active listeners)
- **Facilitator**
  - Process expert responsible for efficiency & effectiveness of meeting
- **Recorder**
  - Documents discussion (usually web-meeting software transcript)

# KSA Rankings (1-4)

- 4** The KSA must be included in the curriculum
- 3** The KSA really should be included in the curriculum
- 2** It would be nice for the KSA to be included in the curriculum
- 1** The KSA can be left out of the curriculum entirely

***This 1-4 ranking criteria considers the following together:***

- Importance
- Level of proficiency
- Time spent doing the skill
- Difficulty - how difficult is the skill to learn?

# Sample KSA Votes

Technical Project Management						
Alpha Number	Knowledge	4	3	2	1	Avg
K-1	Knowledge of computer networking concepts, protocols, and security methodologies.	6	12	7	4	2.69
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).	17	9	3	0	3.48
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	4	9	12	4	2.45
K-4	Knowledge of benchmarking.	13	6	5	1	3.24
K-8	Knowledge of information technology (IT) architectural concepts and frameworks.	11	11	7	0	3.14
K-9	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	6	10	11	2	2.69
K-10	Knowledge of Risk Management Framework (RMF) requirements.	11	11	6	1	3.10
K-11	Knowledge of resource management principles and techniques.	17	10	1	1	3.48
K-12	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	13	11	5	0	3.28
K-13	Knowledge of system life cycle management principles, including software security and usability.	11	6	10	2	2.90
K-14	Knowledge of the organization's enterprise information technology (IT) goals and objectives.	10	11	7	1	3.03



# Sample KSA Vote Cut-off

Technical Project Management							
Alpha Number	Knowledge	4	3	2	1	Avg	
K-1	Knowledge of computer networking concepts, protocols, and security methodologies.	6	12	7	4	2.69	Discuss
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).	17	9	3	0	3.48	
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	4	9	12	4	2.45	Do not map
K-4	Knowledge of benchmarking.	13	6	5	1	3.24	
K-8	Knowledge of information technology (IT) architectural concepts and frameworks.	11	11	7	0	3.14	
K-9	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	6	10	11	2	2.69	Discuss before mapping
K-10	Knowledge of Risk Management Framework (RMF) requirements.	11	11	6	1	3.10	
K-11	Knowledge of resource management principles and techniques.	17	10	1	1	3.48	
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# Practice Vote and Discussion

# Validation/Cross Reference Process

- Faculty cross-reference the prioritized KSAs to existing courses
- Gaps are identified, and curriculum strategy is established for filling gaps
- Results and follow up are reported back to the BILT

# KSA Mapping to Courses

		Technical Project Management							
Alpha Numeric	Knowledge	4	3	2	1	Avg	ITPM1001	ITSC1374	
K-1	Knowledge of computer networking concepts, protocols, and security methodologies.	6	12	7	4	2.69		Thorough	
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).	17	9	3	0	3.48	Exposure		
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	4	9	12	4	2.45	Gap	Gap	
K-4	Knowledge of benchmarking.	13	6	5	1	3.24	Exposure		
K-8	Knowledge of information technology (IT) architectural concepts and frameworks.	11	11	7	0	3.14		Thorough	
K-9	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	6	10	11	2	2.69	Gap	Gap	
K-10	Knowledge of Risk Management Framework (RMF) requirements.	11	11	6	1	3.10	Exposure		
K-11	Knowledge of resource management principles and techniques.	17	10	1	1	3.48	Exposure		
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K-13	Knowledge of system life cycle management principles, including software security and usability.	11	6	10	2	2.90	Exposure		
K-14	Knowledge of the organization's enterprise information technology (IT) goals and objectives.	10	11	7	1	3.03	Gap	Gap	



# Practice Cross- Reference

# Feedback Session

- For all KSAs prioritized over the cut score, work with the BILT to consider
  - The items that are still gaps after you have created new modules/courses
  - The items that are covered only at an exposure or intro level
- Show the breakdown of which K's and S's are covered by which credential you plan to create or modify



Sample Feedback Form for Related Certificates

	CROWDER			
	Plate Certificate	Plate & Pipe Certificate	Plate & Fab Certificate	Welding AAS
KSA's	K1, K2, K3, K4, K5,K6, S1, S2, S3, S4, S5, S6, S7, S8, S9, S12, S13, S19	K1, K2, K3, K4, K5,K6, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S16, S18, S19, S20	K1, K2, K3, K4, K5,K6, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20	K1, K2, K3, K4, K5,K6, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20
Course Title				
Blue Print Reading	WELD 117	WELD 117	WELD 117	WELD 117
Plate Methods I	WELD 160	WELD 160	WELD 160	WELD 160
Plate Methods II	WELD 165	WELD 165	WELD 165	WELD 165
Pipe Methods I		WELD 270		WELD 270
Pipe Methods II		WELD 275		WELD 275
Fabrication Methods I			WELD 280	WELD 280
Fabrication Methods II			WELD 285	WELD 285
Metallurgy Concepts			WELD 136	WELD 136
Intro to Engr Dwg & Print Reading			DRFT 101	DRFT 101
Technical Career Development I		COLL 105	COLL 105	COLL 105
Technical Career Development II		COLL 106	COLL 106	COLL 106
Intro to Automated Robotics				AMT 182
Gen Ed				15 hrs

# Do's and Don'ts

- Use BILT Members to give you the granular Knowledge and Skills that they want a job-ready graduate to possess using the voting process
- DO NOT use BILT Members to get into the extreme details of curriculum



# Do's and Don'ts

- Use BILT Members to problem-solve for highly prioritized KSAs you cannot address for some reason
- DO NOT simply skip the items you cannot address, thinking they won't notice - building trust through honest feedback promotes a deeper relationship

# Do's and Don'ts

- Do use a non-biased facilitator for the meeting
- Faculty members should definitely attend the BILT meetings and function as active listeners and questioners
- Faculty must NOT get defensive if the BILT does not want a course that has been a favorite course to teach

# TO LEARN MORE

- See Pathways to Innovation Website

<http://pathwaystoinnovation.org>

Pathways to Innovation supports cohorts

- To build BILT teams through the BILT Academy to lead innovation
- To learn how to write competitive NSF ATE grants through the Grant-Seeker Academy to fund the innovation the BILT teams desire



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