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Engineering

Engineering Career Prep II: Communication

Value of Effective Communication and Techniques for Improving Your Skills

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At the end of this session, students will be able to:

- Recognize the importance of communication skills for engineers
- Identify and distinguish the 3 pillars of effective communication
- Identify and explore their major communication style
- Create and deliver their Quick Personal Pitch





I communicate most effectively when I...





True or False

✗ Good communication skills are only important for management positions

✗ Students and novice engineers already have good communication skills

✗ Communication skills cannot be taught

Importance of Communication for Engineers



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- Communication skills considered equally important as technical skills
- Communication skills - “**lifeblood**” of practicing engineers
- Engineers spend over half of workday communicating with coworkers and clients



Perils of Poor Communication



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How the customer explained it



How the project leader understood it



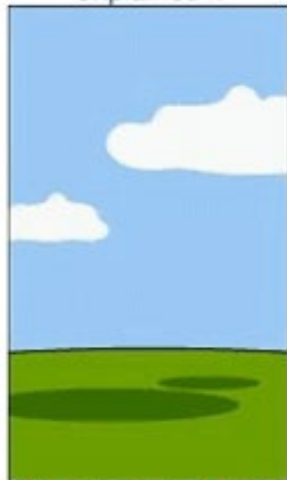
How the engineer designed it



How the programmer wrote it



How the sales executive described it



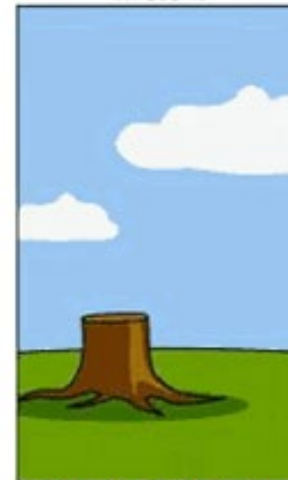
How the project was documented



What operations installed



How the customer was billed



How the helpdesk supported it

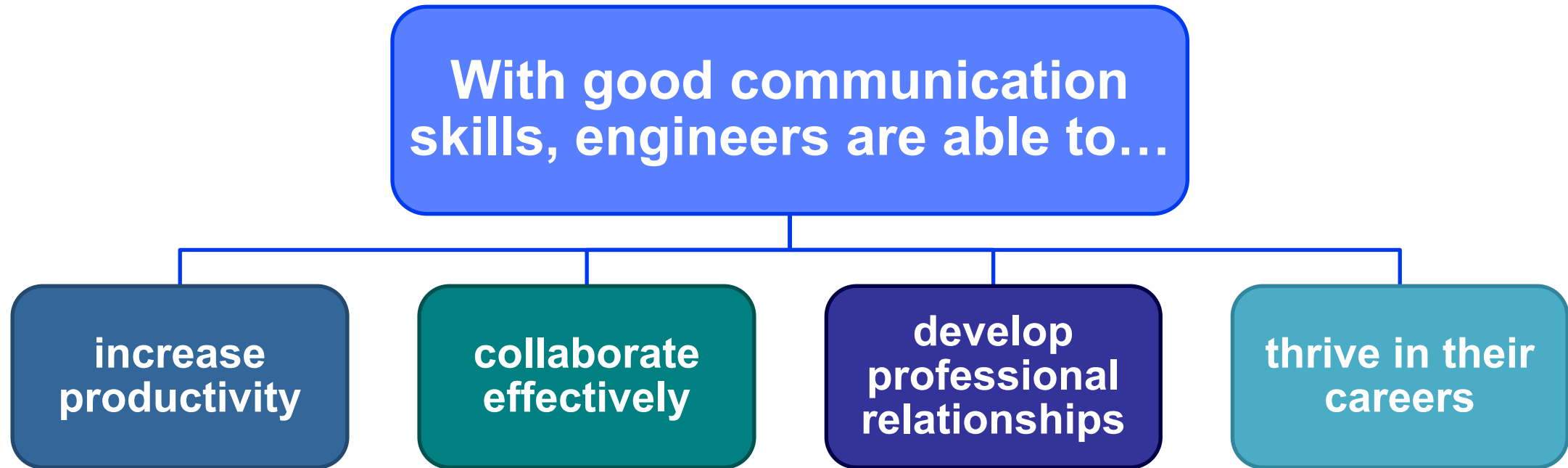


What the customer really needed

Value of Good Communication for Engineers



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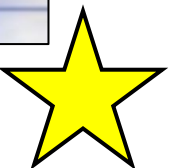
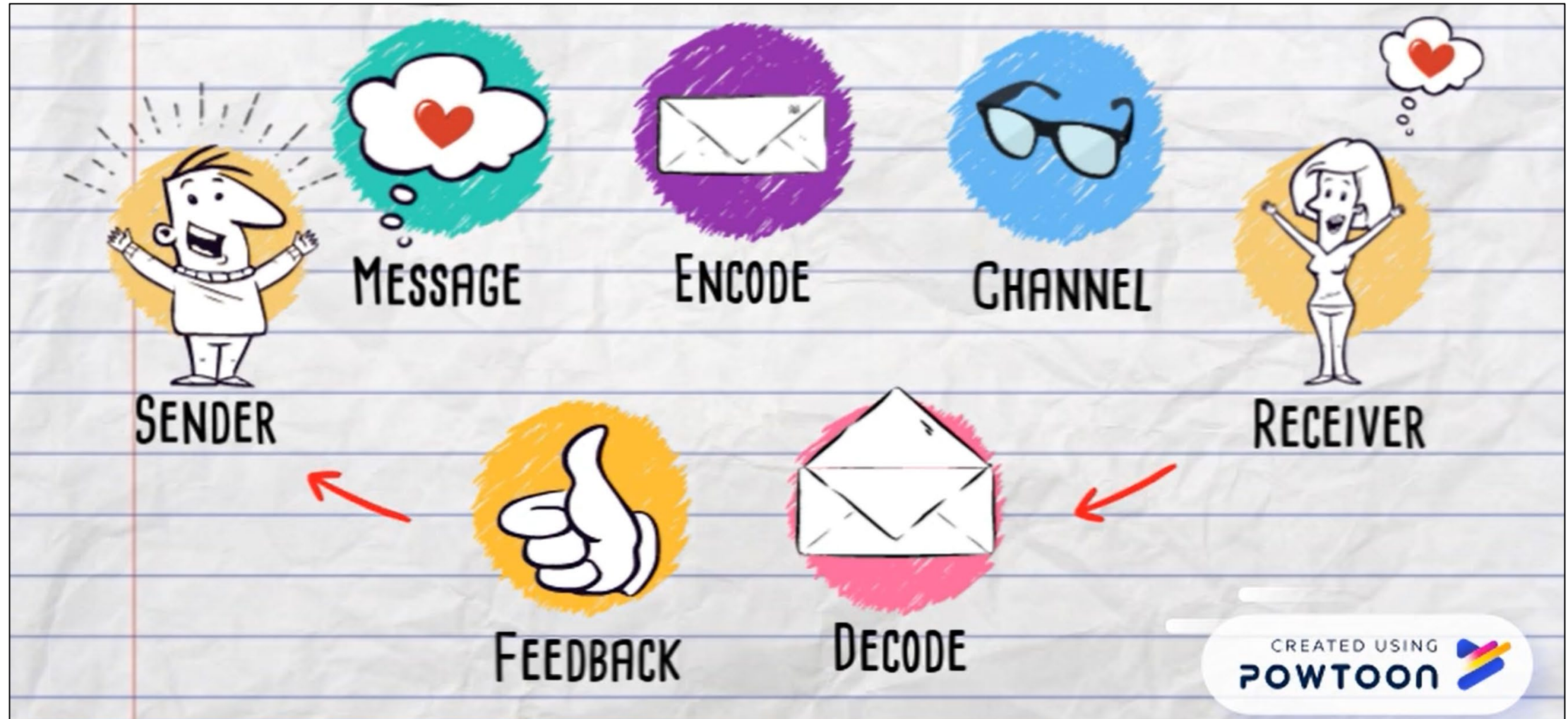


- Communication and presentation skills (public speaking) are an **essential component to professional success**; nearly all jobs involve at least occasional presentations, whether it's to an audience of two or two thousand.
 - Communication is a **Process**
-

The Communication Process



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3 Pillars of Effective Communication



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Knowledge



Skill



Attitude

3 Pillars: Knowledge



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- Beware the “Curse of Knowledge!”
 - Be mindful of your listeners perspective
-



3 Pillars: Skill



- **Consider audience:** Knowledge, skills, attitude, values, goals, cultural background, special needs, personality
 - **Listen to understand:** Do not listen to respond. Be respectful and avoid interrupting.
 - **Paraphrase before responding:** Demonstrates understanding and prevents miscommunication.
 - **Be clear, concise, and consistent.**
 - **Recognize aspects of self:** Knowledge, skills, attitude, values, goals, cultural background, special needs, personality
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Major Communication Styles

Reflection

- Which communication style is most like you?
- How might your professors or employer interpret your communication style?

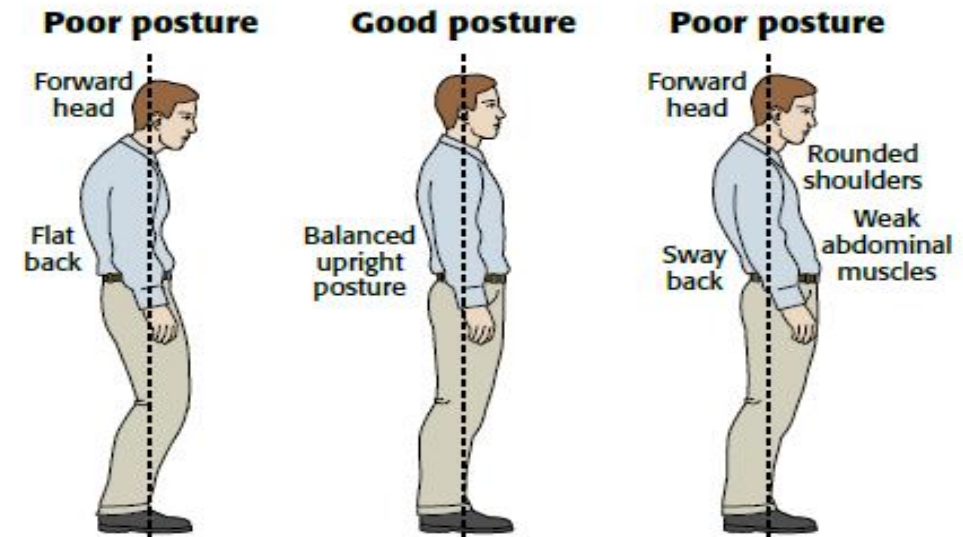
	Task-oriented	People-oriented
Direct	<p>Assertive; decision maker; risk taker; one-way communication; high achiever; talkative; gives orders</p> <p>Style: likes clear, brief, bulleted memos; time conscious:</p> <p>“Don’t waste my time. When can you get that report to me?”</p> <p>Needs: direct, brief, task-relevant information</p>	<p>Persuasive; outgoing; negotiator; talkative; dreamer; big concepts; optimistic; confident; enthusiastic</p> <p>Style: likes open and friendly talk and praise and encouragement:</p> <p>“This is a terrific challenge and opportunity. We can do it.”</p> <p>Needs: recognition, freedom of expression, a challenging</p>
Indirect	<p>Risk-avoidant; thorough; adheres to the rules; factual and meticulous; neat; diplomatic; high standards; accurate</p> <p>Style: likes facts without a lot of personal information or questions:</p> <p>“Just give me the facts. Would you mind telling me what these charges were for?”</p> <p>Needs: accuracy, organization, formal interactions</p>	<p>Friendly, calm, good listener, patient; sincere; team player; likes to focus on one activity at a time</p> <p>Style: likes warm, friendly, accepting, non-confrontational talk:</p> <p>“Good morning. How are you feeling?” “How can I help?”</p> <p>Needs: a friendly, casual environment, to feel appreciated, any details need to be in writing</p>

3 Pillars: Attitude



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- Respect differences
- Create inclusive environment
- Be supportive and positive
- Be mindful of body language & facial expressions





**In engineering, we communicate through
a myriad of communication channels.**

Today, we'll practice the Quick Personal Pitch.





Building Your QPP – Quick Personal Pitch



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- Choose scenario A, B, or C and consider the audience:
 - A. Joining study group or design team
 - B. Establishing rapport with professor during office hours
 - C. Opening the doors to secure 1st internship
 - Select 3 items you want to share about yourself
 - Weave those into a short story
 - Recall the 3 pillars of effective communication
 - No greater than 60 seconds
 - You will continue to evolve this, so no obsession with perfect...yet
 - Create your QPP then practice delivery in small groups
-



The QPP Share



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- Organize in your groups
- Each student shares their QPP followed by peers sharing encouraging critiques
- After 5 minutes, rotate to group 2, and repeat
- After the 2nd 5 minutes, return to your seat for tips on other communication venues and a short debrief

*Communication is a process.
Communication is essential to professional success.
Continue to hone your Quick Personal Pitch.*

Zoom Etiquette



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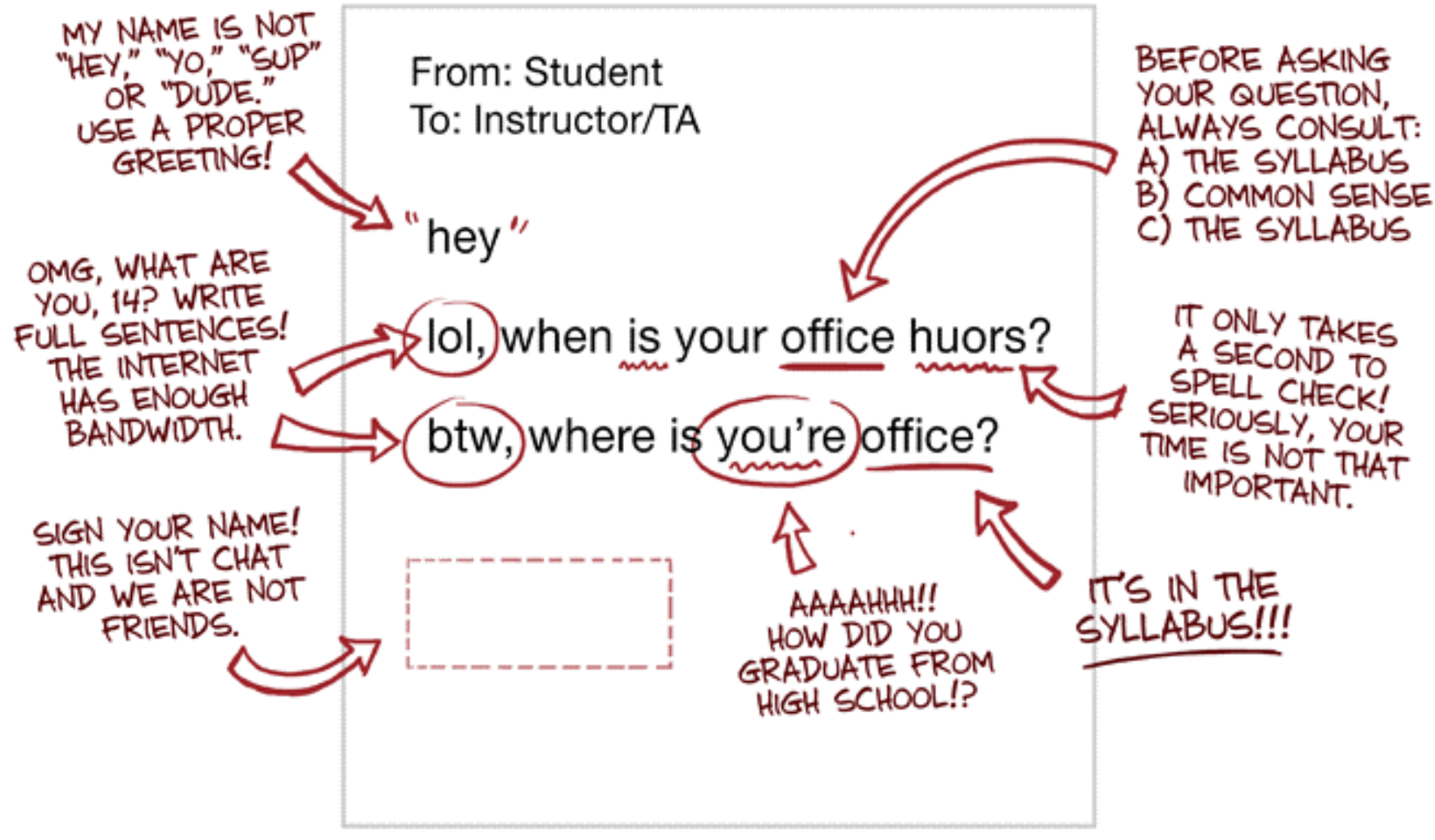
- Be professional
- Turn on your camera
- Check lighting
- Adjust camera angle
- Be mindful of background noise and surroundings



How to Write Emails to Your Instructor



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Communicating with Faculty & Staff



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- Take advantage of office hours
- Ask questions
 - Classwork
 - Research interests
 - Book recommendations
- Be mindful of professional titles
- Assume nothing



Texas A&M Resources

- University Writing Center: [Writing and Speaking Guides](#)
- Academic Success Center: [Talking to Your Professor](#)

External Resources

- Engineering Management Institute: [Why Communication for Engineers is so Important](#)

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