

Mentor Handbook

For Inspire Engineering Mentoring Programme Mentors



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Programme Overview

Congratulations! As a mentor, you are now about to begin a very rewarding and fulfilling experience. Your commitment indicates that you believe in young people. You recognise the magnitude of the responsibility that you accepted in choosing to work with youth and agree to interact appropriately with your mentees according to the highest ethical standards at all times.

This handbook will provide useful information as you begin your mentorship. In it you will find information on the overall programme, what your role is as a mentor, and specific plans for what you will be doing throughout the programme. It will explain what it takes to be a good mentor and what your mentee expects from you. As you progress through the programme, you may find it helpful to turn back to the resources found in this handbook.

This handbook was completed through the collaboration of the Worcester Polytechnic Institute London Project Center and the London Transport Museum, led by the efforts of Inspire Engineering Officer Elizabeth Poulter.

Structure

The basis of the programme will be a year-long commitment to meet once a month with your group of three mentees. This will allow the mentees and mentors to reach the goals of the programme while also maintaining regular contact. There will only be 10 months of group meetings but there will be additional requirements such as a training day and mentor check-in meetings that will be discussed later.

The programme plan begins with several structured meetings that will allow the mentor and mentees to get to know one another, while also beginning to develop basic personal and professional skills. As the programme progresses, there will be freedom in the programme so that mentors can address the specific concerns of their mentees.

As an overview, here is the basic structure of the programme:

- Minimum commitment of one year
- Meet for one hour once a month (ten monthly meetings)
- 3:1 student to mentor ratio
- Programme will begin with structured lesson plans (Meetings 1-7)
- Later meetings will have objectives and activities, but can be adjusted to fit mentee's needs

Year-long
Commitment

Meet once a
month

3:1 mentee to
mentor ratio

Programme Goals and Objectives

Engineering Mentoring Programme Strategic Development Plan			
Overall	Engineering Knowledge	Professional Development	Personal Development
<p>Our Mission: To support students' growth personally and professionally</p> <p>Our Vision: To encourage students' personal and professional development by matching them with a mentor who can encourage them in their daily lives and encourage them to continue on in engineering.</p>	<p>Priority: To develop the students' understanding of engineering</p>	<p>Priority: To encourage students' professional development</p>	<p>Priority: To encourage students' personal development</p>
	<p>Objectives</p> <ul style="list-style-type: none"> ○ Give the students an overview of many engineering fields ○ Provide an understanding of daily life in the engineering industry ○ Allow the students to gain a deeper understanding of engineering by relating it to everyday items 	<p>Objectives</p> <ul style="list-style-type: none"> ○ Explore possible career paths for engineering and the opportunities that each present ○ Build job skills (e.g., CV writing, interview skills) 	<p>Objectives</p> <ul style="list-style-type: none"> ○ Building students' self-confidence through their accomplishments ○ Help find and build the students' ambition and enthusiasm. Use real-world activities to bring life to the programme and explore the students' ambitions ○ Improve students' communication skills by learning how engineers communicate

Expectations

Your Role as a Mentor:

- At the initial stages of the match, your mentees may appear to be hesitant, unresponsive, or unappreciative of the mentor relationship. This guarded attitude is simply a manifestation of their insecurity about the relationship. The mentees' attitude will gradually take a positive turn as they realise your sincerity. *Be patient!* The partnership will become more comfortable for everyone over the course of the first several meetings, so do not rush it.
- Remember that the mentor–mentee relationship has an initial phase. During this phase the mentees are more interested in getting to know how “real” you are and how much they can trust you. It is important to be honest with your mentees so that you can help them to get to know you.
- Don't try to be a teacher, parent, or babysitter. Experience demonstrates that it is counterproductive to assume roles other than a dependable, consistent mentor. Present information carefully without distortion and give all points of view a fair hearing. Listen carefully and offer possible solutions without passing judgment.
- Respect the uniqueness and honour the integrity of your mentees and influence them through constructive feedback. The mentor empowers the mentees to make right decisions without actually deciding for them. Identify the mentees' interests and take them seriously. Be alert for opportunities and teaching moments.
- Set realistic expectations and goals for your mentees and make achievement for them fun. Remember there is a big difference between *encouraging* and *demanding*. Assist in making the connection between their actions of today and the dreams and goals of tomorrow. Mentors have a great deal of impact; it's not always immediately evident.
- Be supportive of the mentees' parental advice, even when you may disagree. As a mentor you should be providing options and advice for the mentees. Do not try and give advice that conflicts with the advice that the mentees are receiving from their parents, but simply explain why you are laying out those options and giving such advice to your mentees.

Qualities of a Good Mentor

Your Measure of Success:

- Your success is measured by many milestones.

Your mentees may realise that they...	Good indications:
✓ have potential	<ul style="list-style-type: none"> ✓ setting goals ✓ developing new skills ✓ improved self-awareness
✓ are confident and self-assured	<ul style="list-style-type: none"> ✓ more comfortable asking questions ✓ ability to lead group discussions
✓ value education and the learning process	<ul style="list-style-type: none"> ✓ planning for future education ✓ evaluating different work options for the future ✓ improved grades
✓ are capable young people	<ul style="list-style-type: none"> ✓ a willingness to help others ✓ ability to see the future ✓ ability to plan for college

Organised

Reliable

Respectful

Motivational

Confident

Encouraging

Knowledgeable

Patient

- Your mentees may reward you in conversation. They may tell you how “great” you are, how you might have helped them with a specific problem, and so much more. It may be big or small. Whatever the compliment, know that what you are doing has had a significant impact on the future of these children.

- You will work with your mentees to establish mutual respect, motivation, and measurable goals. Please don’t hesitate to ask questions if you find any part of the guidelines unclear or confusing. The programme coordinator is available to assist you in any way possible.

- Your commitment and dedication to your mentees may lead to a very profound experience. The quality of the relationship you build directly influences the life and future of the children. Please exert every effort to maintain professional standards, improve your mentor skills, and exercise good judgment when engaged in any activity involving your mentee.

Mentees' Expectations for You

Your mentee will come into the programme with certain expectations of the programme, as well as expectations for you as the mentor. This section will begin to outline those expectations; however they cannot replace the valuable conversation that you should have with your mentees to discuss their individual expectations. As the mentor, you can tailor activities, discussions, and work to your mentees' expectations.

Mentees expect this mentor programme to find a link between their education and what actually happens in engineering in the real world. They are looking for several things including:

- Current state of the field
- What an engineer actually does
- Understand diversity of fields
- How much money they make
- Options of how to enter field
- Females in the industry (this is more specific to female mentees, who may not realize that women work as engineers)
- Help make the shift from technical education to apprenticeships, higher education, or industry
- Mock interviews
- Help with making a better CV

The goal of this programme is to provide personal and professional development for the mentees.

Professional Development includes:

- Knowledge of the engineering field
- Job prospects and what the students should expect from engineering
- How to communicate as an engineer; general and technical communication
- Job Skills such as:
 - How to interview
 - CV preparation

Personal Development includes:

- Confidence
 - Allow the students to grow more self-confident by seeing them solve problems and learning their own potential
 - Notify the students when they are successful, and show them how continued success can relate to positive events
 - Confidence will help with public speaking, interviews, and the mentees' overall presence

Qualities of a Good Mentor

Active listener

Supportive

Open-minded

Approachable

Enthusiastic

Non-Judgmental

Genuine

Trustworthy

- Communication
 - First help the mentees' basic communication skills through conversations between the mentor and mentees
 - Next explore the various ways that engineers communicate, and work with the students on that: group presentations, talking to your superior, talking to peers, and speaking with those below you
 - Writing: Explore and give examples of how engineers communicate through writing and how those skills can be learned in school

Mentor/Mentee Relationship

1. **Be there.**

When you show up for every meeting with your mentees and strive to make things work out, you send your mentees a strong message that you care and that they are worth caring about.

2. **Be a guide, not an all-knowing authority.**

Be the adult in your mentees' lives who is just there without having to "fix" them. Hanging out and talking is surprisingly helpful to a young person's healthy development. Young people learn more conversing with adults than they do just listening to them. In the words of a mentee:

"My parents lecture me all the time. Why would I want my mentor to be the same way? I have the best mentor in the programme, but sometimes he tries too hard to be a mentor instead of just being himself. What I mean is that he thinks he always has to share some wisdom or advice, when sometimes I would rather just kick it and joke around."

Of course, when your mentees come to you for help or advice, it is appropriate to help them develop solutions. They just do not want non-stop advice.

3. **Be a role model.**

The best that you can do is to lead by example. By becoming a mentor, you've already modelled the most important thing a human being can do: caring about another. Here are some other ways you can be a positive role model for your mentees:

- Keep your word: Do what you say you will. Be there when you say you will.
- Have a positive outlook
- If your programme has group sessions, participate fully

4. **Help your mentees have a say in your activities.**

The beginning of the programme is structured so that the mentor and mentees can get to know one another and start to develop the mentees' personal and professional skills. As the programme moves on there will be more freedom to address specific concerns of the mentees. Include the mentees in these conversations so you can ensure that you are addressing what will help them the most.

Safeguarding

This section should be updated once LTM develops its new safeguarding guidelines for its employees. Ambassadors of this program should see the entire LTM safeguarding policy and receive any training that LTM employees that work with children do.

These safeguarding guidelines will help to protect the mentees and you from unsafe situations. As a part of STEMnet you the mentor have already been CRB checked to work with children; therefore this section will help you to keep a safe environment for the mentees as well as yourself. If you have any questions on this topic, please ask the programme coordinator so that proper safety is maintained at all times.

Students' safety is number one. This programme should be an enriching experience for the mentees and a rewarding experience for the mentors; however none of that is possible if safety is not upheld throughout the program. Safeguarding has been adapted from gov.uk at <https://www.gov.uk/government/collections/statutory-guidance-schools> and interpreted by the London Transport Museum.

Important notes

- The groups have been set up in groups of three so that it is a safer environment for you and the mentees. The students are safer as it is a larger group, and you the mentor will not face many uncomfortable one-on-one situations.
- There should be no physical contact between the mentors and mentees.
- There should be no photography or filming without permission from the school administration and the program coordinator.
- Do not interact with your mentees via social media. Social media is not moderated, can lead to falsified information, and does not enhance the professional development that the mentees should be working towards.
- Only interact with your mentees outside of the regularly scheduled meetings via your professional email or the e-mentoring site that has been set up for communication, which the programme coordinator will provide you with details of. All other avenues of communication could become detrimental for the mentees or the mentor.

Discussions between you and your mentees are considered confidential. Be careful about sensitive personal issues. You should not be discussing the details of your mentees with other people except for two cases:

- The first being if one of your mentees is in any danger. If you feel the mentee is any physical or emotional danger, please contact the programme coordinator or the school principal so that they can help with the situation.
- The second situation is if you need assistance in what is the best way to work with your mentees. Throughout the programme you may find it challenging to work with your mentees. Please do not discuss your specific mentees with other mentors, but instead talk to the programme coordinator about some of the difficulties you are experiencing and they can help you work through this situation.

Health and Safety:

Protect the health and safety of your mentees and seek advice from school faculty or programme staff whenever in doubt about the appropriateness of an event or activity and inform school or programme staff of any persons, situations or activities that could affect the health and safety of the children.

- If you have become aware that your mentees' safety or the safety of another is in jeopardy through disclosure (e.g., child abuse, sexual abuse), report your concern to the programme coordinator or teacher immediately. Let your mentee(s) know that you are required to do so. This requirement should always be discussed at the beginning of the relationship to inform the mentees of your obligation to report safety concerns.

Tips for working with students

Difficult Questions

Questions will arise during your mentoring experience that will be difficult to handle and you may not know the answer to. These questions will fall into 1 of 2 categories

1. Difficult to handle as you are not sure of the answer
2. It is an inappropriate question for you to answer

If the question falls under the first category, answer the question as you feel comfortable. It is perfectly acceptable that you do not have the answer to every question. You can give them insight if you have some knowledge of the area they are asking about. It is okay to simply explain to them that you do not know. If you feel it is important you can ask fellow mentors, school administration, or the programme coordinator for assistance with the question. There will be time for this during your quarterly check-in meetings.

If the question falls into the second category, do not answer the question. You may over the course of your relationship become friendly with your mentee, but it is important to steer away from inappropriate questions as they will not be beneficial for the mentorship. Explain to the mentee that the question is too off-topic and discussion needs to stay directed and on-topic so that you both can get the most out of the mentorship.

Behaviour Management

There may be instances when a mentee's behaviour is unacceptable. Here are some tips for handling these types of situations:

- Never physically discipline.
- Never use abusive language.
- Don't use ultimatums.
- Most children will listen and respond to reason. Explain to your mentee why you find his/her behaviour unacceptable.
- Don't give your mentee the silent treatment to solve the problem. Discuss your concerns.

Training Overview

The following is an overview of the topics you will cover during your training day:

1. Why the programme has been developed
2. The structure of the programme
3. The goals and objectives for the students
4. The roles and responsibilities of the mentors
5. The mentor and mentee relationship
6. Answering any questions about the programme
7. Filling out the matching form
8. Communication Training Activities

Note that these activities have been adapted from a peer-mentor training course led by Maria Peters.

Training Takeaways

The following are different lessons that you can learn from each of the Communication Training Activities and use throughout your time as a mentor and as a professional.

Miscommunication

Things to think about:

- Perspective, and how a starting perspective can make a huge difference
- Explaining things clearly from the beginning
- Checking in often to make sure things are understood
- Encouraging questions

Mentees often do not want to admit that they do not understand. They will not ask questions for many reasons including many of the following:

- Fear of looking stupid.
- Already asked once/fear of frustrating instructor
- Lack of confidence

Encourage them to ask questions throughout the program.

You will face questions you may not be able to answer and that is **OK**.

Qualities of a Good Mentor

Things to Think About:

- Good mentoring qualities are effective in creating a comforting environment of the mentees.
- Effective qualities will increase the learning potential of the mentee.
- Always keep in mind how you behave around the mentees. You are a role model; they will take notice and copy ways in which you present yourself both as a person and an industry professional.

Rapport Building

Disclosure

- Offer something (PAUSE)
- People talk more if you first offer something about yourself

Compliments

- Base on who they are
- Do not compliment superficial things, make them more personal
“Tom, I really like that you are so dedicated to your work.”

Name

- Use peoples’ names
 - Avoid during awkward situations

We

Implies support and teamwork
We should do.....
We should try...
is much better when talking about group work

Things to Think About:

It is not always possible to use these techniques in conversation. However, they are powerful tools to improve conversations and rapport with mentees you do not know well. **Try to be conscious of areas in conversation in which you can use these rapport building techniques and use them as often as possible when appropriate.**

Motivating Factors

Things to Think About:

You will never know someone’s exact motivations, but by listening to your mentees you can often pick out their interests. Take note of when people get the “spark in their eye.” Is it when you explain that a project could help others, make them money, inspire creativity, etc. This is powerful in being able to inspire others.

Active Listening

Things to Think About:

As mentors, you should think about how you actively listen to your mentees. When we multitask, we often forget to engage with the speaker and can come off as if we are not listening even if we are. Just by repeating something they said or asking a simple question during a conversation you confirm that you are listening.

Attention of the Intention

Thing to Think About:

Positive Tones: A positive tone to an explanation can greatly affect the outcome of an activity and assignment.

Negative Tones: A negative tone to an explanation can discourage a mentee and greatly affect the activity/assignment, as well as be detrimental to the group's compatibility.

Confidence Identification

Things to Think About:

Mentees will have varying confidence levels; therefore, you need to identify each individual's confidence level and be aware that lower numbers may not respond well in group settings around those with high numbers and vice versa.

Encourage all mentees to partake in discussion and group activities equally.

Evaluation forms

Below are instructions to help you understand when you will receive, complete, and pass in the evaluation forms that you will be completing throughout this programme. Your input will be extremely valuable in improving this programme for future years, so please fill out these forms honestly and thoughtfully.

Meeting Reflection Evaluation Form

- Meeting reflection evaluation forms are located after each lesson in the lesson plan handbook.
- You will be asked to fill out one of these forms at the end of each of meeting you have with your mentees.
- These reflection sheets will aid you in discussing each lesson at your quarterly check-in meetings.

Quarterly Check-in Meetings

- You will meet with the programme coordinator and the rest of the programme's mentors every three months.
 - The date, time, and location of these meetings will be provided to you by the programme coordinator.
 - These meetings are mandatory and will last 1-2 hours.
- First, you will discuss positives and negatives of the past three lessons.
- Next you will discuss any problems that have arisen in your group.
- Finally, you will discuss any questions that have come up during your meetings which you did not know how to answer.
- Any materials that need to be handed in will be collected at the end of the meeting.

Impact Form

- During the third check-in meeting, the programme coordinator will provide you with impact evaluation forms for each student in your group.
- Have your mentees complete this form at the end of your last meeting and collect all the forms.
- Turn these forms in to the programme coordinator during the fourth check-in meeting.

Nutshell Form

- After your sixth and eleventh meetings with your mentees, photocopy their completed nutshell forms. Make sure the photocopy is legible.
- Hand this photocopy in to the programme coordinator at the next check-in meeting.
- For more information about this evaluation form, please refer to the student handbook.

Contact Information

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