

# SCHOOL OF ENGINEERING (SEG)

- Eager to make things happen and turn potential ideas into reality?
- At SEG, you will learn to combine LOGIC and IMAGINATION to become a resourceful PROBLEM-SOLVER who can tackle real-world problems. Let's find innovative solutions to change the way we live!

Current Course Title	Demonstrates Passion or Interest in:	Portfolio (What goes into the portfolio)	Interview (Estimated duration & possible topics/ questions covered)
<b>Aerospace Engineering</b>	<ul style="list-style-type: none"> <li>• Aviation</li> <li>• Aerospace</li> <li>• Drones</li> <li>• Aeromodelling</li> <li>• Mathematics</li> <li>• Physics</li> <li>• Technical skills involving material fabrication (metal, woodwork, plastic, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Certificates of achievement/awards</li> <li>• Engineering/design projects and/or competitions related to the field of study</li> <li>• CCA records, including any evidence of leadership &amp; team skills and/or involvement in service-learning programmes</li> <li>• Participation in aviation related CCAs such as Air Scouts, National Cadet Corps (Air), and Singapore Youth Flying Club</li> <li>• Learning Journeys/Visits to aviation companies or events (e.g. Aviation Open House and Air Show)</li> <li>• Relevant ApLMs*</li> <li>• Hobbies that validate interest in the field of study</li> <li>• RP EAE Portfolio Development (PD) activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 15 minutes</li> <li>• Knowledge and interest about the field of study or industry</li> <li>• Future plans and the relevance of the course</li> <li>• Past experiences and achievements that demonstrate your interest in the course</li> </ul>
<b>Aviation Management</b>	<ul style="list-style-type: none"> <li>• Airport operations</li> <li>• Air traffic management</li> <li>• Airline operations</li> <li>• Flight operations</li> </ul>	<ul style="list-style-type: none"> <li>• Certificates of achievement, awards, projects, and competitions related to aviation</li> <li>• Record of Values-In-Action (VIA) activities</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Knowledge and interest about the field of study or industry</li> <li>• Future plans and the relevance of the course</li> </ul>

Current Course Title	Demonstrates Passion or Interest in:	Portfolio (What goes into the portfolio)	Interview (Estimated duration & possible topics/ questions covered)
	<ul style="list-style-type: none"> <li>• Customer service</li> <li>• Airport planning</li> <li>• Airport management</li> <li>• Aviation safety</li> <li>• Ground operations</li> </ul>	<ul style="list-style-type: none"> <li>• CCA records, including any evidence of leadership &amp; team skills and/or involvement in service-learning programmes</li> <li>• Evidence that demonstrates interest in the field of study, such as hobbies, participations in ApLMs as well as Learning Journeys</li> <li>• Career aspirations</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Past experiences that demonstrate your interest and ability for the course, and what you have learnt from these experiences</li> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> </ul>
<b>Electrical &amp; Electronic Engineering</b>	<ul style="list-style-type: none"> <li>• Aviation</li> <li>• Aerospace</li> <li>• Drones</li> <li>• Internet of Things (IoT)</li> <li>• Embedded systems</li> <li>• Robotics</li> <li>• Augmented reality and virtual reality</li> <li>• Semiconductor</li> <li>• Integrated Circuit (IC) fabrication</li> <li>• Data storage and memory</li> <li>• Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Certificates of achievement/awards</li> <li>• Relevant documents to show participation in areas of interest</li> <li>• Any involvement in volunteering work or service-learning programme</li> <li>• Relevant ApLMs</li> <li>• Hobbies that validate interest in the field of study</li> <li>• CCA records</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• What motivated you to apply for this diploma?</li> <li>• How did you get to know about this industry?</li> <li>• Which specialisation track (aerospace electronics, communications or microelectronics) interests you the most?</li> <li>• CCA roles</li> <li>• Past experiences and achievements that demonstrate your interests in the course</li> <li>• Future plans and the relevance of the course</li> </ul>
<b>Engineering Design with Business</b>	<ul style="list-style-type: none"> <li>• Product design</li> <li>• Electronics prototyping</li> <li>• Mechatronics systems</li> <li>• Project management</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant documents to show participation in activities or competitions related to product design and prototyping/hackathons /computer aided design software /business/digital marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> <li>• CCA roles</li> </ul>

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	<ul style="list-style-type: none"> <li>• Business and marketing</li> <li>• Entrepreneurship</li> <li>• Working with people</li> <li>• Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Any volunteer work or achievement outside of school</li> <li>• CCA records</li> <li>• Any award</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• How did you get to know about this industry?</li> <li>• Which aspects of the industry are you interested in?</li> <li>• Highlight activities that you organised, the challenges you faced and how you overcame them</li> <li>• Past experiences and achievements that demonstrate interest in the course</li> </ul>
<b>Engineering Systems &amp; Management</b>	<ul style="list-style-type: none"> <li>• Robotics</li> <li>• Automatic systems</li> <li>• Intelligent systems</li> <li>• Public land transport systems such as rail operations management and bus fleet management</li> <li>• Emerging vehicular technologies such as electric vehicle and autonomous vehicle</li> <li>• Working with people</li> <li>• Team player</li> <li>• Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant documents to show participation in robotics/ automations/ vehicular/ land transport related activities or competitions</li> <li>• Any volunteer work or achievement outside of school</li> <li>• CCA records</li> <li>• Any award</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> <li>• How did you get to know about this industry?</li> <li>• Which aspects of the industry are you interested in?</li> <li>• CCA roles</li> <li>• Highlight activities that you organised, the challenges you faced and how you overcame them</li> </ul>
<b>Industrial &amp; Operations Management</b>	<ul style="list-style-type: none"> <li>• Business operations management</li> </ul>	<ul style="list-style-type: none"> <li>• CCA records</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> </ul>

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	<ul style="list-style-type: none"> <li>• Process efficiency, productivity optimisation and improvements</li> <li>• Resource, quality, and project management</li> <li>• Process and workflow simulation</li> <li>• Making a difference in designing safe and human-friendly work environments</li> <li>• 3D printing applications</li> <li>• Broad spectrum of industries</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant documents to show participation in activities related to management of operations, resources, logistics, and events through CCA, VIA, ApLMs® or Learning Journeys</li> <li>• Any volunteer work or achievement outside of school</li> <li>• Awards, testimonials, and certificates</li> <li>• RP EAE PD Activities organised by SEG</li> <li>• Participation in business operations, process improvement competitions, and activities</li> </ul>	<ul style="list-style-type: none"> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> <li>• What kind of industry and career are you interested in?</li> <li>• How is your aspiration related to this diploma?</li> <li>• CCA roles</li> <li>• Highlight activities that you organised, the challenges you faced and how you overcame them</li> <li>• Examples of how you improve the way things are done</li> </ul>
<b>Supply Chain Management</b>	<ul style="list-style-type: none"> <li>• Product management</li> <li>• Inventory management</li> <li>• Transport management</li> <li>• Technology application in supply chain and logistics operations</li> <li>• Process improvement and optimisation</li> <li>• Working with people</li> <li>• Team Player</li> <li>• Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• CCA records</li> <li>• Relevant documents to show participation in supply chain/ logistics related activities or competitions</li> <li>• Any volunteer work or achievement outside of school</li> <li>• Awards</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> <li>• How did you get to know about this industry?</li> <li>• Which aspects of the industry are you interested in?</li> <li>• CCA roles</li> <li>• Highlight activities that you organised, the challenges you faced and how you overcame them</li> </ul>

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<b>Sustainable Built Environment</b>	<ul style="list-style-type: none"> <li>• Built environment industry</li> <li>• 3D modelling for buildings/ building information modelling</li> <li>• Sustainable/ green building design</li> <li>• Facilities management</li> <li>• Working with people</li> <li>• Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant documents to show participation in built environment/sustainability related activities or competitions</li> <li>• Any volunteer work or achievement outside of school</li> <li>• CCA records</li> <li>• Awards</li> <li>• RP EAE PD activities organised by SEG</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Why did you choose this diploma?</li> <li>• What motivated you to apply for this diploma?</li> <li>• How did you get to know about this industry?</li> <li>• Which aspects of the industry are you interested in?</li> <li>• CCA roles</li> <li>• Highlight activities that you organised, the challenges you faced and how you overcame them</li> </ul>
<b>Common Engineering Programme</b>	<ul style="list-style-type: none"> <li>• At least one passion or interest stated under any of the SEG courses</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant documents to show completion in Engineering-related ApLMs*</li> <li>• Relevant documents to show participation in Engineering or design-related competitions and/or activities</li> <li>• Learning journeys or visits to engineering-related companies or events</li> <li>• RP EAE PD activities organised by SEG</li> <li>• CCA records, including any evidence of leadership &amp; team skills and/or involvement in volunteering or service-learning programmes</li> <li>• Awards, certificates and/or testimonials</li> </ul>	<ul style="list-style-type: none"> <li>• Duration: 10-15 minutes</li> <li>• Why did you choose this course?</li> <li>• What motivated you to apply for this course?</li> <li>• Share your past experiences and/or achievements related to engineering</li> <li>• What is your aspiration upon completing an engineering course?</li> </ul>

\*Applied Learning Modules (ApLMs) are conducted in the same way as all our regular diplomas. The programme helps secondary school students make informed decisions about education and career plans after their graduations.

For more information, visit <https://www.rp.edu.sg/teachers/APLMS>