

Below is a table listing the student groups, topics, key points, and keywords. The presentations will be conducted in the order of the table, beginning with group I1 and proceeding through to the last group.

Group Member(s)	Branch of Engineering	Presentation Topic	Key Points	Keywords of Research
Touazi Lydia Maache radia Belkhir wissal Hihat imene Abdelli djamila Oulaldj Sophie Ait messaoud nour el houda Merzouk rezissa Maiche ilissa	Civil Engineering	"The Role of Civil Engineers in Sustainable Smart Cities"	1. What is civil engineering? 2. The importance of sustainability in urban planning 3. Role of civil engineers in smart cities 4. Case study: Green buildings and eco-friendly infrastructure 5. Career opportunities in sustainable civil engineering	Smart cities, green buildings, sustainable infrastructure, eco-friendly materials, urban planning, civil engineering innovations
Cherfi Zohra Moussa Tania Azzouz Houda Lasnouni Meriem Benhama Massi Aymen Bouffrora Tohir Belkacem Ghanem Fatah	Process Engineering	"The Role of Process Engineers in Environmental Protection"	1. What is process engineering? 2. How process engineers contribute to pollution control and waste management 3. Role of chemical processes in sustainability 4. Case study: Industrial waste recycling and emissions reduction 5. Career paths in environmental process engineering	Process engineering, environmental protection, pollution control, waste management, industrial recycling, sustainability, chemical processes

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Ait Saidi Haname, Zeggane Lydia, Djerada Louiza, Krimat Thilelli, Sadoui Imene, Kessir Mohand , Ardjoune Ines, Alioua Nesrine, Boussif Manel, Benatsou Nassim	Electrotechnical Engineering	"The Role of Electrotechnical Engineers in Smart Power Grids"	1. What is electrotechnical engineering? 2. The importance of smart grids in modern energy distribution 3. Role of electrotechnical engineers in designing power networks 4. Case study: Smart grids and renewable energy integration 5. Career paths in electrotechnical engineering	Smart grids, power distribution, renewable energy, electrical automation, energy storage, smart homes
YACHI Amine, YOUBA ISSAAD, BouhachiaTARIK, Cherifi Djallal, Boudena Salah, Hallil Hamouche Brahim Sahnoune, Alitouche Bachir Kamel, Tibouche Badreddine	Computer Engineering	"Cybersecurity and the Role of Computer Engineers in Digital Protection"	1. What is computer engineering? 2. The importance of cybersecurity in the modern world 3. How computer engineers develop security systems 4. Case study: Preventing cyber attacks on critical infrastructure 5. Career paths in cybersecurity and computer engineering	Cybersecurity, hacking prevention, encryption, data protection, network security, computer engineering, ethical hacking

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Marina Bounif, Racha Mellal, Hanane Guissi, Kahina Issaad, Hayat Amrani, Katia Hanaya, Ilyes Amrouche	Automation Engineering	"The Impact of Automation in Modern Industry"	1. What is automation engineering? 2. Role of automation in industrial production 3. The impact of robotics and AI in manufacturing 4. Case study: Smart factories and Industry 4.0 5. Future career opportunities in automation engineering	Automation, industrial robotics, AI in manufacturing, Industry 4.0, smart factories, control systems, automation engineering careers
Bouyahia Merouane, Aissou Nour El Imane, Ghermine Sara, Yahiaoui Amel, Benjadda Ramy Allaoua, Mananouil Mohamed Cherif, Oullami Islam, Hachemi Rayan, Bouchenna Mohamed	Mechanical Engineering	"The Role of Mechanical Engineers in Renewable Energy Systems"	1. Overview of mechanical engineering 2. How mechanical engineers contribute to wind turbines, solar panels, and hydroelectric plants 3. Innovations in sustainable mechanical designs 4. Case study: Wind turbine gearbox optimization 5. Career opportunities in renewable energy for mechanical engineers	Renewable energy, wind turbines, solar power, hydroelectric systems, mechanical design, sustainability
Mellal Racha, Issaad Kahina, Amrouche Ilyes, Bounif Liddy	Automation Engineering	"The Impact of Automation in Modern	1. What is automation engineering? 2. Role of	Automation, industrial robotics, AI in manufacturing,

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Marina, Amri Anies, Amrani Hayette, Hanaya Katia, Guissi Hamane		Industry"	automation in industrial production 3. The impact of robotics and AI in manufacturing 4. Case study: Smart factories and Industry 4.0 5. Future career opportunities in automation engineering	Industry 4.0, smart factories, control systems, automation engineering careers
Ait Alimane Souad, Alloua Lina, Idir Yousra, Kharouni Lina, Terki Syrine, Akrouche Imane, Cherradou Thileli, Lalouani Radia	Process Engineering	"The Role of Process Engineers in Sustainable Manufacturing"	1. What is process engineering? 2. Importance of sustainability in industrial manufacturing 3. How process engineers optimize production with minimal waste 4. Case study: Green chemistry and eco-friendly materials 5. Career opportunities in sustainable process engineering	Process engineering, sustainable manufacturing, green chemistry, waste reduction, industrial optimization, eco-friendly materials
Lounis chahinez . Boudjemaa lina. Ifourah Imene. Azegagh rosa . Alem katia. Rahmouni kamylia . Lalaoui nesrine .Ouchen imane	Automation Engineering	"Artificial Intelligence in Industrial Automation"	1. What is automation engineering? 2. Role of artificial intelligence in industrial automation 3. How AI improves efficiency,	Industrial automation, artificial intelligence, robotics, smart factories, predictive maintenance, machine learning,

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			quality control, and predictive maintenance 4. Case study: AI-driven robots in manufacturing 5. Career opportunities in AI and automation engineering	automation engineering