



## Young Envoys Scholarship

YOUNG ENVOYS SCHOLARSHIP (YES) è un articolato programma di relazioni culturali ed accademiche internazionali proposto e gestito dal Ministero cinese dell'Educazione e gestito in collaborazione con la China Education Association for International Exchange (CEAIE).

Fra le numerose attività è stata programmata una International Summer School in ambito ingegneristico di quattordici giorni presso la Xi'an Jiaotong University. I/le partecipanti potranno scegliere il programma da seguire tra sei diverse discipline: Electrical Engineering, Mechanical Engineering, Materials Science and Engineering, Electronic and Information Engineering, Aerospace Engineering, Chemical Engineering and Technology. Il periodo può essere selezionato tra 3 sessioni distinte: dal 6 Luglio al 19 Luglio, dal 20 Luglio al 2 Agosto, dal 24 Agosto al 6 Settembre.

Gli studenti e studentesse selezionati avranno l'opportunità di immergersi nel panorama tecnologico della Cina, approfondire tematiche legate allo sviluppo sostenibile, partecipare a conferenze accademiche e industriali, nonché svolgere attività pratiche all'interno di aziende e visitare siti storici.

Di seguito la bozza delle attività programmate per le diverse discipline trasmessa dal comitato esecutivo del programma (il presente programma potrebbe subire variazioni):

### Electrical Engineering

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district

<b>Giorni 2-6</b>	Morning	Academic Lecture
	Noon	Introduction to basic Chinese
	Afternoon	Academic Lecture
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting

<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show

<b>Giorno 8</b>	Whole Day	Free activities
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<b>Giorni 9-12</b>	Whole Day	Company Tour
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<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
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<b>Giorno 14</b>	Whole Day	Departure
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## Mechanical Engineering

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district

<b>Giorno 2</b>	Morning 09:00-09:30	Introduction of SAE
	Morning 10:00-10:40	Academic Lecture: Soft robot for real world applications (Prof Libo)
	Morning 10:40-11:20	Academic Lecture: characterization of plasticity and ductile fracture of advanced metals under complex loading (Prof Lou Yanshan)
	Afternoon 14:30-15:10	Academic Lecture: The design of smart surface for drag reduction and applications (Prof Qin Liguao)
	Afternoon 15:10-15:20	Group Picture
	Afternoon 15:30-17:00	Academic Lecture: big data-driven intelligent fault diagnosis and prognosis of mechanical systems (Prof Lixiang)

<b>Giorno 3</b>	Morning 09:00-10:20	Academic Lecture: Advanced Manufacturing Technology for Low-cost and High quality Fibre Reinforced Composites (Prof Chenshuai) , freetalk (10 minutes)
	Morning 10:25-11:30	Academic Lecture: Machine Tool Thermal Error Modeling and Application through Integration of Data and Mechanism (Prof Shihu)
	Afternoon 14:30-15:30	Academic Lecture: Digital twin-driven health management and remaining useful life prediction of the gearbox transmission system (Prof Fengke), freetalk (10 minutes)
	Afternoon 15:40-16:40	Academic Lecture: Key Technologies of Battery Management System for Electric Vehicles & Robots (Prof Xujun)

<b>Giorno 4</b>	Morning 09:00-10:30	Academic Lecture: Smart microrobots using near-field acoustic adhesion (Prof Penjun)
	Morning 10:35-11:30	Academic Lecture: Soft electroactive materials and robots (Prof Zhu Zicai)
	Afternoon 14:30-15:30	Academic Lecture: Physics-informed deep neural networks for constitutive modelling of inelastic materials (Prof Chenqiang)
	Afternoon 15:35-17:00	Academic Lecture: 3D printing human tissue: where engineering meets biology (Professor Zhuhui)

<b>Giorno 5</b>	Morning 09:10-10:10	Academic Lecture: Biosensing and Biofabrication: Where Engineering, Biology, and Medicine Converge (Prof Lixiao )
	Morning 10:15-11:30	Academic Lecture: Fixed-abrasive electrochemical mechanical polishing of semiconductor wafers (Prof Yangxu)
	Afternoon 14:30-16:00	Academic Lecture: Industrial AI and intelligent maintenance of mechanical systems (Prof Lixiang)
	Afternoon 16:10-17:30	Academic Lecture: Numerical modeling of high performance machining processes theory and approach (Prof Liuhongguang)

<b>Giorno 6</b>	Morning 09:00-10:15	Academic Lecture: Surface Texture and its Tribological Application (Prof Zhanghui)
	Morning 10:20-11:30	Academic Lecture: Interfacial Fluids and Heat Transfer on Micro/nano Structures (Prof Shimeng)
	Afternoon 14:30-16:00	Academic Lecture: eco-friendly reuse of metal chips with near-zero energy consumption and greenhouse emission (Prof Louyanshan)
	Afternoon 16:05-17:20	Academic Lecture: 3D printing in the new production pattern Research (fellow Wulingling)

<b>Giorni 2-6</b>	Noon	Introduction to basic Chinese
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting

<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show

<b>Giorno 8</b>	Whole Day	Free activities
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<b>Giorni 9-12</b>	Whole Day	Company Tour: Geely auto Xi'an manufacturing base tour, Shaanxi Shuoke Intelligent Technology Co, Xi'an Huazhong CNC Ltd
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<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
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<b>Giorno 14</b>	Whole Day	Departure
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## Materials Science and Engineering

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district

<b>Giorno 2</b>	Morning	Selected topics: Low dimension electronic materials synthesis and characterization
	Afternoon	Selected topics: Electron microscopy and its application in materials science
<b>Giorno 3</b>	Morning	Selected topics: Advanced functional oxides for optoelectronic applications
	Afternoon	Selected topics: Advanced ceramic: fabrication, properties and applications
<b>Giorno 4</b>	Morning	Selected topics: Atomistic simulations of dislocation mobility in high-entropy alloys
	Afternoon	Selected topics: Novel Materials for future memory and neuro-inspired computing technologies
<b>Giorno 5</b>	Morning	Selected topic: Electrically doped organic solar cells
	Afternoon	Selected topics: The interplay between 2D materials and ferroelectric materials
<b>Giorno 6</b>	Morning	Selected topics: Thermal spray techniques and their applications
	Afternoon	Selected topics: Design and development of computing materials in phase change memory
<b>Giorni 2-6</b>	Noon	Introduction to basic Chinese
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting
<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show
<b>Giorno 8</b>	Whole Day	Free activities
<b>Giorni 9-12</b>	Whole Day	Company Tour: State-Key Laboratory for Mechanical Behavior of Materials (SKL-MBM), Institute of Materials Science and Engineering, Western China Science & Technology Innovation Harbour (iHarbour), Northwest Institute for Non-Ferrous Metal Research Shaanxi Institute for Materials Engineering, Western Baode Technologies Co. Ltd., Shaanxi Sirui Advanced Materials Co., Ltd.
<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
<b>Giorno 14</b>	Whole Day	Departure

## Electronic and Information Engineering

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district
<b>Giorno 2</b>	Morning	Selected topics in Control Science and Technology
	Afternoon	Selected topics in Control Science and Technology
<b>Giorno 3</b>	Morning	Selected topics in Computer Science and Technology
	Afternoon	Selected topics in Computer Science and Technology
<b>Giorno 4</b>	Morning	Selected topics in Electronic Science and Engineering
	Afternoon	Selected topics in Electronic Science and Engineering
<b>Giorno 5</b>	Morning	Selected topics in Communications Engineering
	Afternoon	Selected topics in Communications Engineering
<b>Giorno 6</b>	Morning	Selected topics in Micro Electronics Engineering
	Afternoon	Selected topics in Micro Electronics Engineering
<b>Giorni 2-6</b>	Noon	Introduction to basic Chinese
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting
<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show
<b>Giorno 8</b>	Whole Day	Free activities
<b>Giorni 9-12</b>	Whole Day	Company Tour: Visit Tour in BYD, Huawei, ZTE, China UniCom, China Mobile, etc. (TBD)
<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
<b>Giorno 14</b>	Whole Day	Departure

## Aerospace Engineering

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district

<b>Giorno 2</b>	Morning 09:00-09:30	Introduction of SAE
	Morning 10:00-11:00	Academic Lecture: Fracture mechanics of heterogeneous soft materials (Prof Wang Zhengjin)
	Afternoon 15:00-16:00	Academic Lecture: coexistence of spatio-temporal scales and dynamic crossovers in complex fluids (Prof Zhao Songchun)
<b>Giorno 3</b>	Morning 10:00-11:00	Academic Lecture: Mechanics of Hydrogels and Applications? (Prof Tang Jingda)s
	Afternoon 15:00-16:00	Academic Lecture: Lectures: Thermal in our life and universe (Prof Yue Shengying)
<b>Giorno 4</b>	Morning 10:00-11:00	Academic Lecture: Biophysical fingerprints of diseases and cancers (Prof Chang Zhuo)
	Afternoon 15:00-16:00	Academic Lecture: In-situ studies of grain micromechanics using X-ray techniques (Prof Zhai Chongpu)
<b>Giorno 5</b>	Morning 10:00-11:00	Academic Lecture: A discontinuity feedback factor for compressible flow simulation (Prof Jixing)
	Afternoon 15:00-16:00	Academic Lecture: Modeling of the thermomechanical behavior of braided SiCf/SiC composite cladding tube during irradiation (Prof Liwei)
<b>Giorno 6</b>	Morning 10:00-11:10	Academic Lecture: Aerodynamics of insect flight (Prof Meng Xueguang)
	Afternoon 15:00-16:00	Academic Lecture: Hypersonic aerodynamic for vehicle and propulsion (Prof Zuo Fengyuan)
<b>Giorni 2-6</b>	Noon	Introduction to basic Chinese
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting
<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show
<b>Giorno 8</b>	Whole Day	Free activities
<b>Giorni 9-12</b>	Whole Day	Company Tour: Geely auto Xi'an manufacturing base tour, Shaanxi shuoke intelligent technology co, Xi'an huazhong cnc ltd
<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
<b>Giorno 14</b>	Whole Day	Departure

## Chemical Engineering and Technology-Carbon Neutralization Pathways and Technologies

<b>Giorno 1</b>	Morning	Arrival at Xi'an & Check-in
	Afternoon	Orientation Campus tour
	Evening	Visit the "The Longest Day in Chang'an" theme block, China's first immersive Tang-style city life district
<b>Giorno 2</b>	Morning 09:00-09:50	Introduction of SCET
	Morning 09:50-10:20	Laboratory Tour
	Have a break	10-minute Break
	Morning 10:30-12:00	Lecture 1: Carbon Neutralization Related Topic
	Afternoon 14:30-16:00	Lecture 2: Catalysis and Fuel Cells Related Topic
	Afternoon 16:00-16:20	Group Picture
	Afternoon 16:20-17:00	Campus Tour
<b>Giorno 3</b>	Morning 10:00-11:00	Lecture 3: Carbon Dioxide Conversion Related Topic
	Afternoon 15:00-16:00	Campus Tour + University Museums
<b>Giorno 4</b>	Morning 10:00-11:00	Lecture 4: Biotransformed Proteins Related Topic
	Afternoon 15:00-16:00	Lecture 5: Carbon Capture and Utilization Related Topic
<b>Giorno 5</b>	Morning 10:00-11:00	Lecture 6: Carbon Capture and Utilization Related Topic
	Afternoon 15:00-16:00	Lecture 7: Solar Receiver and Storage Related Topic
<b>Giorno 6</b>	Morning 10:00-11:10	Lecture 8: Metal Hydride Heat Pump Systems Related Topic
	Afternoon 15:00-16:00	Lecture 9: Hydrogen Economy Related Topic
<b>Giorni 2-6</b>	Noon	Introduction to basic Chinese
	Evening	Experiencing traditional Chinese culture: Chinese calligraphy, Paper cutting
<b>Giorno 7</b>	Morning	Visit the Ming City Wall Ruins
	Afternoon	Visit the emperor Qinshihuang's mausoleum site museum Visit Huaqing Palace and tour Mount L
	Evening	Watch the Changheng musical show
<b>Giorno 8</b>	Whole Day	Free activities
<b>Giorni 9-12</b>	Whole Day	Company Tour: BYD Auto Industry Co., Ltd. Tour, Shaanxi Blower (Group) Co., Ltd. Tour, Shaanxi Coal Chemical Industry Technology Research Institute Co. Ltd Tour, LONGi Green Energy Technology Co. Ltd. Tour, Shaanxi Hydrotransformer Energy Technology Co. Ltd. Tour



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<b>Giorno 13</b>	Morning	Wrap-up meeting and Farewell Ceremony
<b>Giorno 14</b>	Whole Day	Departure