上海建桥学院课程教学进度计划表

**一、1. Basic Information**

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| --- | --- | --- | --- |
| Course Number | 2080389 | Course name | Engineering Drawing |
| Credit | 4 | Total class hours | 64 |
| teacher | Chi Hieu | email | 20719@gench.edu.cn |
| class | 机制B22-1 | Classroom | Live Streaming Lecture via VooV |
| 答疑时间 | Thursday 14:00-16:00 |
| Textbook | [1] Colin H. Simmons, Neil Phelps & Dennis E. Maguire. Manual of Engineering Drawing. 4th edition. Elsevier Newnes.Linacre House, Jordan Hill， Oxfrod OX2 8DP 200-Wheeler RoadBurlington MA 08103. 2004. ISBN: 9789382291572. Link to download PDF book (4th Edition, 2012): https://1drv.ms/b/s!AlgSK-CtflAOkXZNbPskM30Q-Mug?e=EorNYi[2] K. Rathnam (2017). A first course in Engineering Drawings. Springer Nature Singapore. ISBN 978-981-10-5358-0. Link to download PDF book: https://1drv.ms/b/s!AlgSK-CtflAOkXdnMp\_2\_TFfOF8h?e=hPbbggAutoCAD: 2019 & 2020 VersionsSolidworks: 2012 Version |
| Textbook References | [1] Lin HU, Engineering Drawing (Chinese-English Bilingual Edition), China Machine Press, 2005.9.[2] Junyou Zhao, Engineering Graphics, China University of Petroleum Press, 2014.9.[3] Colin H. Simmons/Dennis E. Maguire. Manual of Engineering Drawing. (Second edition). Elsevier Newnes. Linacre House, Jordan Hill，Oxfrod OX2 8DP 200-Wheeler Road，Burlington MA 08103. 2004 |

**二、Teaching Schedule**

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| week | Teaching content | Teaching method | homework |
| 1 | 🗹 Course Introduction: • Contents, learning outcomes, Assessment • Learning and Teaching activities; • Introduction to Engineering Drawings •Learning Motivation | Virtual learning via Online learning video: Panopto | In-class activities & Supplementary Exercises |
| 2 | 🗹 Engineering drawing and sketching methods: • Perspective projection, parallel projection, oblique projection and oblique drawings, isometric projection and isometric drawings • Orthographic projection and orthographic drawings: Introduction & overviews. | Virtual learning via Online learning video: PanoptoLive Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 3 | 🗹 Orthographic projection and orthographic drawings: • Principles of orthographic projection • Three views of the object in orthographic drawings • Projection of points, lines and planes  | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 4 | 🗹 Orthographic projection and orthographic drawings: • Projection of Solids and composite solids • Cutting of solids and intersection of solids • Analysis of composite solids. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 5 | 🗹 Engineering drawings and Dimensioning: • Drawing layouts and simplified methods • Exploded assembly drawings • Sections and sectional views. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 6 | 🗹 Engineering drawings and Dimensioning: •Dimensioning principles •Dimensioning methods • Dimensions and Dimensional Tolerance. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 7 | 🗹 Engineering drawings and Dimensioning: • Geometric dimensioning and tolerancing • Types of geometrical tolerances • Methods of indicating geometrical tolerances on engineering drawings. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 8 | 🗹 2D & 3D CAD design and modelling for Engineering Drawings – Fundamentals: • Concepts and applications • Representation of point, lines, curves • Wireframe, surface and solid modelling • Applications of 2D & 3D CAD to create Engineering Drawings. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 9 | 🗹 2D CAD design and modelling for Engineering Drawings – AutoCAD: • Brief introduction to AutoCAD • Basic operations of AutoCAD and settings • Coordinate systems: Absolute Cartesian Coordinates, Relative Cartesian Coordinates, Cartesian & Polar Coordinates • Creating geometric entities • Modifying geometric entities • Control the data inputs in AutoCAD: Dynamic Inputs, Turn on & off SNAP • Demonstrations and case studies | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 10 | 🗹 2D CAD design and modelling for Engineering Drawings – AutoCAD: • Layers: Organization of a drawing by assigning objects to layers • Modification Operation Functions and Tools. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 11 | 🗹 2D CAD design and modelling for Engineering Drawings – AutoCAD: • Overviews of dimensioning in AutoCAD • Dimensioning functions in AutoCAD: Linear, Aligned, Angular, Radius, Diameter, Continue, Baseline and Ordinate Dimensioning.  | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 12 | 🗹 2D CAD design and modelling for Engineering Drawings – AutoCAD • Tile and Attributes • Dimensional tolerance and shape tolerance • Standard drawings in AutoCAD • Data Transfer and 2D Drawing Interfaces • Managing settings of Engineering drawings and plotting • Demonstrations and case studies. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 13 | 2D & 3D CAD design and modelling for Engineering Drawings – Solidworks: • Overview about 3D Solid Modelling  User Interface • Part modelling | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 14 | 🗹 2D & 3D CAD design and modelling for Engineering Drawings – Solidworks: • Part modelling (continuation) | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 15 | 🗹 2D & 3D CAD design and modelling for Engineering Drawings – Solidworks: • Part Assembly • Creation of Engineering Drawings from 3D part and assembly models | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 16 | 🗹 2D & 3D CAD design and modelling for Engineering Drawings – Solidworks: • Exploded Views & Assembly & Bill of Materials • Advanced 3D modelling topics.  | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 17 | 🗹 2D & 3D CAD design and modelling for Engineering Drawings: • Design Documentation in Design and Product Development, • Design Documentation with AutoCAD & Solidworks. | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |
| 18 | 🗹 Course Reviews, case studies & demonstrations.🗹 Q&A sections and preparation for Exam (closed-book,120 minutes). | Live Streaming Lecture via VooV | In-class activities & Supplementary Exercises |

**三、Assessment**

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| **Marks（1+X）** | **Assessment** | **Weightage** |
| 1 | Exam (closed-book,120 minutes) | 50% |
| 2 | Coursework – Group Projects | 50% |

Teacher ：Chi Hieu LE Dean of Department： date：