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What are the 5 text structures

It's the foundation on which we build every single thing. The decisions we make must comply with this basis. If that doesn't happen, the core of what we're building is weakened. For businesses, this foundation is a culture. For individuals, this foundation is integrity. Here are the Eexamples good culture companies. O'Reily Media culture says: Produce more value than we set aside. Amazon is When customer and company interest differs, choose customer interest. Personal integrity can be something consistent with do the right thing (it's usually a difficult thing). Initially, structural integrity may seem to limit options. The integrity of the structure provides direction and shows us how to build. Structural integrity forces us to find solutions within the limits of what is right. There are many potential solutions to the problem, it is important that we find the right solution.➞Please SHARE this piece if you think it will help others.➞Get my best writing, sign up for my newsletter. Join Hacker Noon Create your free account to unlock your custom reading experience. 2.01x introduces the principles of structural analysis and strength of the material in applications on three essential types of elastic supporting elements: rods in axial load, oxymetric shaft in the torso and symmetric beams in bending. The course covers the basic concepts of continuum mechanics, including internal results, displacement field, stress and strain. Highlighting analytical techniques, the course also provides an introduction to computer environments (MATLAB). This is the first dish in the three-part series. In this series, you will learn how mechanical engineers can use analytical methods and calculations of the back of the envelope to predict structural behavior. Three courses in the series are: Part 1 – 2.01x: Elements of structures. (Elastic response of structural elements: bars, panes, beams). Part 2 – 2.02.1x Mechanics of deformable structures: Part 1. (Thermal expansion, plasticity, viscosity. Assemblies of elastic, elastic-plastic and viscoelastic rods). The next session starts in February 2019.Part 3 – 2.02.2x Deformable Structures Mechanics: Part 2. (Asamblase elastic, elastic-plastic and viscoelastic grilles of axles and beams. Multiaxial loading and deformation. Pressure ships. energy methods). The next session starts in June 2019.These courses are based on the first course in solid mechanics for MIT mechanical engineering students. Join them and learn to rely on notions of balance, geometric compatibility and constitutive material response to ensure that your structures will perform their specific mechanical function without failure. At 2.01x you will: Use free body diagrams to formulate balance equations; Identify geometric limitations for formulating compatibility equations; Understand stress and strain at the material point. For three fundamental types of slender structural elements (elastic rods, beams and axles), you will learn: to calculate the inner fields of stress and strain in the loaded elements; anticipate deformation in loaded elements; design structural elements to prevent failure; numerical methods (MATLAB) in the application of structural engineering. Week 1: Introduction and preliminating introduction, power and moment review, integration review, introduction to MATLAB. Week 2: Axial Loading I Equilibrium in 1D. Free body diagrams. Internal force results. Normal stress and strain. Compatibility. Structural odib for static determination of rods in axial load. Week 3: Axial Loading II Response of Nonhomogenic Bars with Different Cross Sections. Static unspecified problems. Week 4: Quiz 1 (Axial Loading) Week 5: Torasia IShear Stress and Strain. Internal swearing results. Structural response for static determination of circular axles in the torso. Week 6: Torasia II Response of nonhomogenic axles with different cross section. Static unspecified problems. Week 7: Quiz 2 (Torzija) Week 8: Bending IInternal Bending Moment Score. Curvature and neutral wasp. Stress and stress distribution. Structural response for static determination of symmetric beams in bending. Week 9: Bending II Response of non-chomogenic beams with different cross sections. Static unspecified problems. Week 10: Quiz 3 (Bending)Receive an instructor-signed certificate with the institution's logo to confirm your achievement and increase job prospectsAdd certificate to your RESUME or RESUME, or post it directly to LinkedInGive yourself an additional incentive to complete the courseEdX, a nonprofit, relies on verified certificates to help fund free education for everyone globally This has been an outstanding and truly enjoyable course... Didactic (and fun) video lessons; concise and clear notes from the committee; problems and quizzes with outstanding (and very professionally presented) sections of responses, which were very useful for consolidating the acquired knowledge... Being a senior engineer who has spent most of his career in management, this makes me really envious of the opportunities that current students, from all over the world, have to attend top classes like this. Q: I'm a little rusty on my computing skills and the foundations of physics; Am I going to make this course? A: Probably yes! During the first week, we review all the concepts necessary to understand the course material. Q: Is this exchange rate similar to the housing exchange rate at MIT? A: Yes, a three-course series covers the same material taught at MIT Housing Course 2,001: Mechanics and Materials I (the first fundamental course of mechanical engineering is usually taken the first semester of the second year) The structure determines so much about the material: its properties, its properties and its effectiveness within these applications. This course from MIT's Department of Materials Science and Engineering explores the structure of a wide range of materials with current engineering applications. The course begins with an introduction to amorphous materials. We investigate glasses and polymers, learn about factors that affect their structure, and learn how materials scientists measure and describe the structure of these materials. We then begin a discussion about the crystal condition, exploring what it means for the material to be crystalline, how we describe the instructions in the crystal, and how we can determine the structure of the crystal through X-ray diffraction. We are exploring the underlying crystal structures that underpin so much of the material that surrounds us. Finally, we look at how tensors can be used to represent the properties of three-dimensional materials and consider how symmetry places limitations on material properties. We continue to explore quasi-, plastic and liquid crystals. Next, we learn about the dotted defects that are present in all crystals and we will learn how the presence of these defects leads to diffusion in materials. Next, we will investigate the dislocations in the materials. We will present the descriptors we use to describe dislocations, learn about the movement of dislocation and consider how dislocations dramatically affect the strength of the material. Finally, we will explore how defects can be used to strengthen materials, and we will also learn about the properties of higher order defects such as stacking faults and grain boundaries. How we characterize the structure of glasses and polymers Principles of X-ray diffrasion that allow us to probe the structure of crystals How symmetry of materials affects material properties Properties of liquid crystals and how these materials are used in modern display technologies How defects affect the numerous properties of materials – from conductivity of semiconductors to strength of structural materials Part 1 : Introduction to materials Scientific material structure material travelogue of matter state and binding Part 2 : Descriptors Descriptors: Concept and Function Free Quantity Function Pair Distribution Function Part 3: Glasses Glass Processing Methods Continuous Network Model Network Modifiers Part 4: Polymers Random Walk Model Chain-to-Chain End Distance Order and Mess in Polymers Part 5: Introduction to Crystal State Translational Symmetry Crystal State in 2D Crystal State in 3D Part 6 : Real and Reciprocal Space Miller Indices Real Space Reciprocal Space Part 7 : X-Ray Diffraction Bragg's Law Diffraction Examples Part 8: Symmetry in 2D Crystals Translation, Mirror, Slip and Rotation of Symmetry Part 9: Dotted Groups in 2D Allowed Rotational Symmetry in Crystals 10 2D Point Introduction to crystallographic notation Part 10: Aeroplane groups in 2D Five types of 2D grilles 17 groups of planes in 2D part 11: Symmetry in inversion of 3D crystals, Roto-inversion and roto-reflection Screw symmetry Part 12: Group Space Point Group 3D Space Point Group Stereographic Projection Part 13: 3D Space Groups Crystal Grids SpaceGroup Part 14: Introduction to Tensors Symmetry Limitations on Material Properties Coordinate Transformation Part 15 : Quasi, Plastic and Liquid Crystals Quasi Crystals Introduction to Plastic and Liquid Crystals Liquid Crystal Descriptors Application of Liquid Crystal Part 16: Introduction to Point Defects Thermodynamics of Point Defects Vacancies, interstitials, solid solutions and balance defects Part 17: Ionic Point Defects & Diffusion Kröger-Vink Notation Extrinsic Defects Diffusion Part 18: Dislocations and Deformations Part 19: Strengthening & Surface Energy Strengthening Mechanisms Surface Energy Wulff Shape Part 20 : 2-dimensional defects Surface defects Stacking faults Grain boundaries Surface reconstruction Linear defects in liquid crystals Receive a certificate signed by an instructor with the logo of the institution to confirm your achievement and increase job prospectsAdded certificate in cv or CV, or post it directly on LinkedInGive yourself an additional incentive to complete the courseEdX, a nonprofit, relies on verified certificates to help fund free education for everyone globallyUnfortunately , students from one or more of the following countries or regions will not be able to register for this course: Iran, Cuba and the Crimea region of Ukraine. 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