Aug 31-Wed1 Syllabus, Hydrogen Atom, CM & Relative Motion, Hydrogenic SystemsSep 2-Fri2 Atomic units, Radial & Angular Wave fns, Energy Spectrum1Sep 5-MonLABOR DAY1Sep 7-Wed3 Hydrogen atom in 2-dimension, Variational Method2Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms2Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 16-Fri7 Diamagnetism and Paramagnetism in atoms3Sep 19-Mon8 Born-Oppenheimer approximation4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 23-Fri11 Electronic configuration of diatomic molecules5Sep 30-Fri13 REVIEW5Ct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell5Oct 12-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 14-Fri18 Structure factor for lattices with a basis6Oct 12-Wed20 Nearly free electron (NFE) model7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Mon22 Electrical Conductivity and Classical Hall effect in NFE model7Oct 24-Mon22 Electrical Conductivity and Classical Hall effect in NFE model7Oct 24-Mon23 Electrical Conductivity and Classical Hall effect in NFE model7Oct 24-Mon24 Itight binding model in 2d and 3d8 </th <th>Date</th> <th>Lecture # Materials to be covered</th> <th>HW Assig</th>	Date	Lecture # Materials to be covered	HW Assig		
Sep 2-Fri2 Atomic units, Radial & Angular Wave fns, Energy Spectrum1Sep 5-MonLABOR DAY1Sep 7-Wed3 Hydrogen atom in 2-dimension, Variational Method2Sep 9-Fri4 Spin Orbit interaction, Hyperfine Interaction, Hellman-Feynman Theorem2Sep 12-Mon5 N-electron atoms, Electronic configurations3Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 14-Wed9 Molecular Orbital theory, H2 molecule3Sep 14-Wed9 Molecular Orbital theory, H2 molecule4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 24-Wed9 Molecular Orbital theory, H2 molecule4Sep 26-Mon11 Electronic configuration of diatomic molecules4Sep 26-Mon12 Heisenberg Model for H25Sep 30-Fri13 REVIEW5Oct 3-MonEXAM 15Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction5Oct 12-Wed17 Ewald's construction5Oct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bicch's Theorem, Energy Bands7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Mon25 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 4-Fri28 Niderm Discussion8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einst	Aug 31-Wed	1 Syllabus, Hydrogen Atom, CM & Relative Motion, Hydrogenic Systems			
Sep 5-MonLABOR DAYSep 7-Wed3 Hydrogen atom in 2-dimension, Variational MethodSep 9-Fri4 Spin Orbit interaction, Hyperfine Interaction, Hellman-Feynman Theorem2Sep 12-Mon5 N-electron atoms, Electronic configurationsSep 14-Wed6 Hund's Rules, Magnetic properties of atomsSep 14-Wed9 Molecular Orbital theory, H2 moleculeSep 21-Wed9 Molecular Orbital theory, H2 moleculeSep 23-Fri10 H2 molecule, Heitler-London approximationSep 24-Wed12 Heisenberg Model for H2Sep 28-Wed12 Heisenberg Model for H2Sep 28-Wed12 Heisenberg Model for H2Sep 28-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellCct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellCct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeCct 10-Mon16 Brilloun Zone, X-Ray DiffractionCct 14-Fri18 Structure factor for lattices with a basisCct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Cct 24-Mon22 Heatle, Semiconductors, Insulators (Band structure)Cct 24-Mon25 Hejth binding model in 1dCct 28-Fri24 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 14-Mon30 Einstein model of specific heatNov 14-Mon30 Einstein model of specific heatNov 14-Mon30 Einstein model of specific	Sep 2-Fri	2 Atomic units, Radial & Angular Wave fns, Energy Spectrum			
Sep 7-Wed3 Hydrogen atom in 2-dimension, Variational MethodSep 9-Fri4 Spin Orbit interaction, Hyperfine Interaction, Hellman-Feynman Theorem2Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 19-Mon8 Born-Oppenheimer approximation3Sep 19-Mon8 Born-Oppenheimer approximation4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 28-Wed12 Heisenberg Model for H25Sep 30-Fri13 REVIEW5Oct 3-MonEXAM 15Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell5Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction5Oct 14-Fri18 Structure factor for lattices with a basis6Oct 19-Wed20 Nearly free electron (NFE) model7Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Won25 Electrical Conductivity and Classical Hall effect in NFE model8Oct 31-Mon25 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 4-Fri27 REVIEW7Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific hea	Sep 5-Mon	LABOR DAY			
Sep 9-Fri4 Spin Orbit Interaction, Hyperfine Interaction, Hellman-Feynman Theorem2Sep 12-Mon5 N-electron atoms, Electronic configurations3Sep 14-Wed6 Hund's Rules, Magnetic properties of atoms3Sep 16-Fri7 Diamagnetism and Paramagnetism in atoms3Sep 19-Mon8 Born-Oppenheimer approximation3Sep 21-Wed9 Molecular Orbital theory, H2 molecule3Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 28-Wed12 Heisenberg Model for H25Sep 30-Fri13 REVIEW7Oct 3-MonEXAM 17Oct 3-MonEXAM 17Oct 12-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell5Oct 12-Wed17 Ewald's construction5Oct 12-Wed17 Ewald's construction6Oct 14-Fri18 Structure factor for lattices with a basis6Oct 14-Fri19 Bloch's Theorem, Energy Bands7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Fri24 Tight binding model in 1d8Oct 28-Fri24 Tight binding model in 2d and 3d8Nov 4-Fri27 REVIEW7Nov 4-Fri28 Midterm Discussion9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat10Nov 14-Mon30 Einstein model of specific heat10 <td>Sep 7-Wed</td> <td>3 Hydrogen atom in 2-dimension, Variational Method</td> <td></td>	Sep 7-Wed	3 Hydrogen atom in 2-dimension, Variational Method			
Sep 12-Mon5 N-electron atoms, Electronic configurationsSep 14-Wed6 Hund's Rules, Magnetic properties of atomsSep 16-Fri7 Diamagnetism and Paramagnetism in atoms3Sep 19-Mon8 Born-Oppenheimer approximation4Sep 21-Wed9 Molecular Orbital theory, H2 molecule5Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 28-Wed12 Heisenberg Model for H25Sep 28-Wed12 Heisenberg Model for H25Sep 30-Fri13 REVIEW7Oct 3-MonEXAM17Cot 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction6Oct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands7Oct 24-Wed20 Nearly free electron (NFE) model7Oct 24-Mon25 Tight binding model in 1d8Oct 24-Mon25 Tight binding model in 2d and 3d7Oct 24-Wed26 Lattice Vibrations, Acoustic and Optic modes8Oct 31-Mon25 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Ova 4-Fri27 REVIEW7Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 11-Fri29 Quantization of lattice vibrations, pholarons10Nov 21-Mon30 Einstein model of specific heat10Nov 14-	Sep 9-Fri	4 Spin Orbit interaction, Hyperfine Interaction, Hellman-Feynman Theorem	2		
Sep 14-Wed6 Hund's Rules, Magnetic properties of atomsSep 16-Fri7 Diamagnetism and Paramagnetism in atoms3Sep 19-Mon8 Born-Oppenheimer approximation4Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 26-Mon11 Electronic configuration of diatomic molecules4Sep 30-Fri12 Heisenberg Model for H25Sep 30-Fri13 REVIEW7Oct 3-MonEXAM 17Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell7Oct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction6Oct 12-Wed17 Ewald's construction6Oct 14-Fri18 Structure factor for lattices with a basis6Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Wed25 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Ox 4-Fri27 REVIEW78Nov 4-Fri27 REVIEW89Nov 4-Fri28 Midterm Discussion9Nov 14-Mon30 Einstein model of specific heat9Nov 14-Mon30 Einstein model of specific heat70Nov 21-Mon32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Sep 12-Mon	5 N-electron atoms, Electronic configurations			
Sep 16-Fri7 Diamagnetism and Paramagnetism in atoms3Sep 19-Mon8 Born-Oppenheimer approximationSep 21-Wed9 Molecular Orbital theory, H2 moleculeSep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 26-Mon11 Electronic configuration of diatomic moleculesSep 28-Wed12 Heisenberg Model for H2Sep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 14-Fri18 Structure factor for lattices with a basisOct 17-Mon19 Bloch's Theorem, Energy BandsOct 12-Wed20 Nearly free electron (NFE) modelOct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 28-Fri24 Tight binding model in 1dOct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed28 Midterm DiscussionNov 4-Fri27 REVIEWNov 7-Mon28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phononsNov 11-Fri29 Quantization of specific heatNov 14-Mon30 Einstein model of specific heatNov 14-Mon32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 14-Wed	6 Hund's Rules, Magnetic properties of atoms			
Sep 19-Mon8 Born-Oppenheimer approximationSep 21-Wed9 Molecular Orbital theory, H2 moleculeSep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 28-Mon11 Electronic configuration of diatomic moleculesSep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 24-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 4-Fri28 Midterm DiscussionNov 7-MonEXAM2Nov 11-Fri29 Quantization of lattice vibrations, phononsNov 11-Fri29 Quantization of lattice vibrations, phononsNov 14-Mon30 Einstein model of specific heatNov 21-Mon33 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 16-Fri	7 Diamagnetism and Paramagnetism in atoms	3		
Sep 21-Wed9 Molecular Orbital theory, H2 moleculeSep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 26-Mon11 Electronic configuration of diatomic molecules5Sep 28-Wed12 Heisenberg Model for H25Sep 30-Fri13 REVIEW5Oct 3-MonEXAM 15Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell5Oct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction6Oct 12-Wed17 Ewald's construction6Oct 14-Fri18 Structure factor for lattices with a basis6Oct 21-Fwi21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 24-Mon25 Tight binding model in 2d and 3d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 4-Fri27 REVIEW7Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Sep 19-Mon	8 Born-Oppenheimer approximation			
Sep 23-Fri10 H2 molecule, Heitler-London approximation4Sep 26-Mon11 Electronic configuration of diatomic moleculesSep 28-Wed12 Heisenberg Model for H2Sep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 24-Mon25 Tight binding model in 1dOct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-Mon28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phononsNov 11-Fri29 Quantization of lattice vibrations, phononsNov 11-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 21-Wed	9 Molecular Orbital theory, H2 molecule			
Sep 26-Mon11 Electronic configuration of diatomic moleculesSep 28-Wed12 Heisenberg Model for H2Sep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 28-Fri24 Tight binding model in 1dOct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 11-Fri29 Quantization of lattice vibrations, phononsNov 14-Mon30 Einstein model of specific heatNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 23-Fri	10 H2 molecule, Heitler-London approximation	4		
Sep 28-Wed12 Heisenberg Model for H2Sep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 28-Wed23 Electrical Conductivity and Classical Hall effect in NFE modelOct 28-Fri24 Tight binding model in 1dOct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 11-Fri29 Quantization of lattice vibrations, phononsNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 26-Mon	11 Electronic configuration of diatomic molecules			
Sep 30-Fri13 REVIEWOct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 28-Fri24 Tight binding model in 1dOct 28-Fri24 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 7-MonEXAM2Nov 14-Fri29 Quantization of lattice vibrations, phononsNov 14-Fri29 Quantization of lattice vibrations, phononsNov 14-Fri29 Quantization of lattice vibrations, phononsNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 28-Wed	12 Heisenberg Model for H2			
Oct 3-MonEXAM 1Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal LatticeOct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basisOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 28-Fri24 Tight binding model in 1dOct 28-Fri24 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 11-Fri29 Quantization of lattice vibrations, phononsNov 14-Mon30 Einstein model of specific heatNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Sep 30-Fri	13 REVIEW			
Oct 5-Wed14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS CellOct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 10-Mon16 Brilloun Zone, X-Ray Diffraction7Oct 12-Wed17 Ewald's construction6Oct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands6Oct 19-Wed20 Nearly free electron (NFE) model7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 4-Fri29 Quantization of lattice vibrations, phonons9Nov 16-Wed31 Debye model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 3-Mon	EXAM 1			
Oct 7-Fri15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice5Oct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands6Oct 19-Wed20 Nearly free electron (NFE) model7Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 9-Wed28 Midterm Discussion9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 16-Wed31 Debye model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 5-Wed	14 Midterm discussion, Bravais lattices, Cubic, FCC, BCC, WS Cell			
Oct 10-Mon16 Brilloun Zone, X-Ray DiffractionOct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands6Oct 19-Wed20 Nearly free electron (NFE) model7Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE model8Oct 31-Mon25 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes7Nov 4-Fri27 REVIEW7Nov 9-Wed28 Midterm Discussion9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 7-Fri	15 Lattice with basis, Hexagonal, HCP, Reciprocal Lattice	5		
Oct 12-Wed17 Ewald's constructionOct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands6Oct 19-Wed20 Nearly free electron (NFE) model7Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE model8Oct 31-Mon25 Tight binding model in 1d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 7-MonEXAM29Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 10-Mon	16 Brilloun Zone, X-Ray Diffraction			
Oct 14-Fri18 Structure factor for lattices with a basis6Oct 17-Mon19 Bloch's Theorem, Energy Bands7Oct 19-Wed20 Nearly free electron (NFE) model7Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE model8Oct 31-Mon25 Tight binding model in 1d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 7-MonEXAM29Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 12-Wed	17 Ewald's construction			
Oct 17-Mon19 Bloch's Theorem, Energy BandsOct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE model8Oct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes7Nov 4-Fri27 REVIEW7Nov 7-MonEXAM27Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 14-Fri	18 Structure factor for lattices with a basis	6		
Oct 19-Wed20 Nearly free electron (NFE) modelOct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)7Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE model8Oct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 7-MonEXAM29Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 16-Wed31 Debye model of specific heat10Nov 21-Mon32 Plasmons, Polaritons, and Polarons10	Oct 17-Mon	19 Bloch's Theorem, Energy Bands			
Oct 21-Fri21 NFE model, Heat capacity, Pauli susc., Landau diamag.7Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)2Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE modelOct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d8Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27 REVIEW7Nov 7-MonEXAM2Nov 9-Wed28 Midterm Discussion9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 16-Wed31 Debye model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 19-Wed	20 Nearly free electron (NFE) model			
Oct 24-Mon22 Metals, Semiconductors, Insulators (Band structure)Oct 26-Wed23 Electrical Conductivity and Classical Hall effect in NFE modelOct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 21-Fri	21 NFE model, Heat capacity, Pauli susc., Landau diamag.	7		
Oct 26-Wed23Electrical Conductivity and Classical Hall effect in NFE modelOct 28-Fri24Tight binding model in 1d8Oct 31-Mon25Tight binding model in 2d and 3d8Nov 2-Wed26Lattice Vibrations, Acoustic and Optic modes8Nov 4-Fri27REVIEW7Nov 7-MonEXAM27Nov 9-Wed28Midterm Discussion9Nov 11-Fri29Quantization of lattice vibrations, phonons9Nov 16-Wed31Debye model of specific heat9Nov 18-Fri32Plasmons, Polaritons, and Polarons10Nov 21-Mon33Plasmons, Polaritons, and Polarons10	Oct 24-Mon	22 Metals, Semiconductors, Insulators (Band structure)			
Oct 28-Fri24 Tight binding model in 1d8Oct 31-Mon25 Tight binding model in 2d and 3d3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modes7Nov 4-Fri27 REVIEW7Nov 7-MonEXAM2Nov 9-Wed28 Midterm Discussion9Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Oct 26-Wed	23 Electrical Conductivity and Classical Hall effect in NFE model			
Oct 31-Mon25 Tight binding model in 2d and 3dNov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phononsNov 14-Mon30 Einstein model of specific heatNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Oct 28-Fri	24 Tight binding model in 1d	8		
Nov 2-Wed26 Lattice Vibrations, Acoustic and Optic modesNov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heatNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons	Oct 31-Mon	25 Tight binding model in 2d and 3d			
Nov 4-Fri27 REVIEWNov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heatNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons	Nov 2-Wed	26 Lattice Vibrations, Acoustic and Optic modes			
Nov 7-MonEXAM2Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phonons930 Einstein model of specific heatNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and Polarons1033 Plasmons, Polaritons, and Polarons	Nov 4-Fri	27 REVIEW			
Nov 9-Wed28 Midterm DiscussionNov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat9Nov 16-Wed31 Debye model of specific heat10Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Nov 7-Mon	EXAM2			
Nov 11-Fri29 Quantization of lattice vibrations, phonons9Nov 14-Mon30 Einstein model of specific heat10Nov 16-Wed31 Debye model of specific heat10Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons10	Nov 9-Wed	28 Midterm Discussion			
Nov 14-Mon30 Einstein model of specific heatNov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and PolaronsNov 21-Mon33 Plasmons, Polaritons, and Polarons	Nov 11-Fri	29 Quantization of lattice vibrations, phonons	9		
Nov 16-Wed31 Debye model of specific heatNov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons	Nov 14-Mon	30 Einstein model of specific heat			
Nov 18-Fri32 Plasmons, Polaritons, and Polarons10Nov 21-Mon33 Plasmons, Polaritons, and Polarons	Nov 16-Wed	31 Debye model of specific heat			
Nov 21-Mon 33 Plasmons, Polaritons, and Polarons	Nov 18-Fri	32 Plasmons, Polaritons, and Polarons	10		
	Nov 21-Mon	33 Plasmons, Polaritons, and Polarons			

Nov 23-Wed	34	Optical processes and Excitons
Nov 25-Fri	THANKS (	GIVING
Nov 28-Mon	35	Optical processes and Excitons
Dec 2-Fri	36	Ferromagnetism and Antiferromagnetism
Dec 5-Mon	37	Superconductivity
Dec 7-Wed	38	Superconductivity
Dec 9-Mon	38	REVIEW
Dec 12-Mon	FINAL	EXAMINATION