

**Browse Quality Core Curriculum Standards by subject****Subject: Agriculture****Grade: 9-12****Course: Agricultural Business and Management**

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- 50**     **Standard:** Develops math, reading and writing skills as they relate to the agribusiness industry.
- 51**     **Standard:** Explores the scope of and careers in the agribusiness industry.
- 52**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 54**     **Standard:** Develops record-keeping skills.
- 55**     **Standard:** Develops computer skills in agribusiness management.
- 56**     **Standard:** Develops skills needed for employment in agribusiness management.
- 57**     **Standard:** Develops skills in agribusiness management.
- 58**     **Standard:** Develops basic knowledge in organizing an agricultural business.
- 59**     **Standard:** Conducts and interprets a feasibility study for starting an agribusiness in a selected area of agriculture.
- 60**     **Standard:** Identifies the problems and scope of management in agribusiness.
- 61**     **Standard:** Keeps and uses financial records to analyze and solve management problems.
- 62**     **Standard:** Develops and analyzes short- and long-range management plans for agribusiness's.
- 63**     **Standard:** Explores ways to make the most efficient use of capital resources.
- 64**     **Standard:** Manages and protects financial resources.
- 65**     **Standard:** Develops math, reading and writing skills as they relate to the agribusiness sales and service industry.
- 67**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 70**     **Standard:** Develops record-keeping skills.
- 71**     **Standard:** Develops computer skills in agribusiness sales and service.
- 72**     **Standard:** Develops skills needed for employment in the sales and service industry of agriculture.
- 73**     **Standard:** Develops management skills in agribusiness sales and service.
- 74**     **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 75**     **Standard:** Identifies the availability of agricultural jobs and the pay, working conditions and worker benefits of each.
- 77**     **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78**     **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79**     **Standard:** Competitively prices agricultural products and services.

## Course: Agricultural Leadership and Development

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- 38 Standard:** Explores the scope of and careers in the agribusiness industry.
- 39 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 51 Standard:** Explores the scope of and careers in the agribusiness industry.
- 52 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 63 Standard:** Explores ways to make the most efficient use of capital resources.
- 66 Standard:** Explores the scope of and careers in the agribusiness sales and service industry.
- 67 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 68 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 74 Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 75 Standard:** Identifies the availability of agricultural jobs and the pay, working conditions and worker benefits of each.
- 82 Standard:** Explores the scope of and careers in the animal science and biotechnology industry.
- 83 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 84 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 101 Standard:** Describes the underlying scientific principles of animal growth and development.
- 108 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 109 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 130 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 131 Standard:** Explores the scope of and career opportunities in the food science and safety industry.
- 133 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 149 Standard:** Explores the scope of and careers in the environmental science industry.
- 150 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 151 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 168 Standard:** Identifies and lists uses and characteristics of natural resources.
- 176 Standard:** Explores the scope of and careers in the agricultural mechanization industry.
- 177 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 178 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 191 Standard:** Explores the scope of and careers in the small engine industry.
- 192 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 193 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 208 Standard:** Explores the scope of and careers in the metal fabrication industry.

- 209**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 210**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 228**     **Standard:** Explores the scope of and careers in the concrete construction industry.
- 229**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 230**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 244**     **Standard:** Explores the scope of and careers in the agricultural building construction industry.
- 245**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 246**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 264**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 265**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 279**     **Standard:** Explores the scope of and careers in the agricultural electrification industry.
- 280**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 281**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 302**     **Standard:** Explores the scope of and careers in the agricultural machinery, equipment and tractor industry.
- 303**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 304**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 314**     **Standard:** Explores the scope of and careers in the soil and water conservation industry.
- 315**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 316**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 344**     **Standard:** Explores the scope of and careers in the plant production industry.
- 345**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 346**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 366**     **Standard:** Explores the scope of and careers in the agricultural products and processing industry.
- 367**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 368**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 381**     **Standard:** Explores the scope of and careers in the forest production and management industry.
- 382**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 383**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 413**     **Standard:** Explores the scope of and careers in the natural resource industry.
- 414**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 415**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 431**     **Standard:** Explores the scope of and careers in the floriculture industry.

- 432**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 433**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 451**     **Standard:** Explores the scope of and careers in the floral design and management industry.
- 452**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 453**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 469**     **Standard:** Explores the scope of and careers in the nursery production and management industry.
- 470**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 471**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 487**     **Standard:** Explores the scope of and careers in the landscape design and management industry.
- 488**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 489**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.

## Course: Agricultural Mechanics Technology I

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- 51**     **Standard:** Explores the scope of and careers in the agribusiness industry.
- 66**     **Standard:** Explores the scope of and careers in the agribusiness sales and service industry.
- 107**     **Standard:** Explores the scope of and careers in the plant science and biotechnology industry.
- 162**     **Standard:** Explores the scope of and careers in the forestry and natural resources industry.
- 176**     **Standard:** Explores the scope of and careers in the agricultural mechanization industry.
- 190**     **Standard:** Develops math, reading and writing skills as they relate to the small engine industry.
- 191**     **Standard:** Explores the scope of and careers in the small engine industry.
- 192**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 193**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 194**     **Standard:** Demonstrates safety practices related to small engines.
- 195**     **Standard:** Develops record-keeping skills.
- 196**     **Standard:** Develops computer skills relevant to the small engine industry.
- 197**     **Standard:** Develops skills needed for employment in the small engine industry.
- 198**     **Standard:** Develops management skills relevant to the small engine industry.
- 199**     **Standard:** Identifies small engine types and parts.
- 201**     **Standard:** Performs seasonal/routine service for small engines.
- 208**     **Standard:** Explores the scope of and careers in the metal fabrication industry.
- 209**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 210**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 211**     **Standard:** Demonstrates safety practices related to metal working.
- 212**     **Standard:** Develops record-keeping skills.
- 213**     **Standard:** Develops computer skills relevant to the metal fabrication industry.

- 214 Standard:** Develops skills needed for employment in the metal fabrication industry.
- 215 Standard:** Develops management skills relevant to the metal fabrication industry.
- 216 Standard:** Uses measuring instruments in metal fabrication.
- 217 Standard:** Sets up welding and cutting equipment.
- 218 Standard:** Identifies the properties of metals.
- 219 Standard:** Performs welding and cutting operations in a safe and efficient manner.
- 220 Standard:** Operates metal fabrication tools.
- 221 Standard:** Performs soldering operations.
- 223 Standard:** Operates the hydraulic iron worker safely and efficiently.
- 224 Standard:** Operates the drill press safely and efficiently.
- 225 Standard:** Operates grinders safely and efficiently.
- 226 Standard:** Operates power metal saws safely and efficiently.
- 227 Standard:** Develops math, reading and writing skills as they relate to the concrete construction industry.
- 228 Standard:** Explores the scope of and careers in the concrete construction industry.
- 229 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 230 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 231 Standard:** Demonstrates safety practices related to concrete work.
- 232 Standard:** Develops record-keeping skills.
- 233 Standard:** Develops computer skills relevant to the concrete construction industry.
- 234 Standard:** Develops skills needed for employment in the concrete construction industry.
- 236 Standard:** Estimates concrete construction and material costs.
- 238 Standard:** Prepares a concrete construction job.
- 239 Standard:** Constructs concrete forms and reinforcement.
- 240 Standard:** Mixes and pours concrete.
- 241 Standard:** Finishes poured concrete surfaces.
- 243 Standard:** Develops math, reading and writing skills as they relate to the agricultural building construction industry.
- 244 Standard:** Explores the scope of and careers in the agricultural building construction industry.
- 245 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 246 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 247 Standard:** Demonstrates safety practices related to building construction.
- 248 Standard:** Describes safety rules and first-aid procedures.
- 249 Standard:** Develops record-keeping skills.
- 250 Standard:** Develops computer skills relevant to the agricultural building construction industry.
- 251 Standard:** Develops skills needed for employment in the agricultural construction industry.
- 252 Standard:** Uses wood working and other construction tools safely and efficiently.
- 253 Standard:** Develops management skills relevant to the agricultural building construction industry.
- 258 Standard:** Maintains and stores wood-working and other construction tools.

- 262 Standard:** Develops math, reading and writing skills as they relate to irrigation and plumbing.
- 263 Standard:** Explores the scope of and careers in the irrigation and plumbing industry.
- 265 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 266 Standard:** Demonstrates safety practices related to irrigation and plumbing.
- 267 Standard:** Develops record-keeping skills.
- 268 Standard:** Develops computer skills relevant to the irrigation and plumbing industry.
- 269 Standard:** Develops skills needed for employment in the irrigation and plumbing industry.
- 272 Standard:** Selects irrigation and plumbing materials and tools.
- 273 Standard:** Estimates irrigation and plumbing materials cost.
- 274 Standard:** Lays out irrigation and plumbing jobs.
- 275 Standard:** Cuts and joins pipe.
- 276 Standard:** Installs irrigation and plumbing systems.
- 277 Standard:** Maintains and repairs irrigation and plumbing.
- 278 Standard:** Develops math, reading and writing skills as they relate to the agricultural electrification industry.
- 279 Standard:** Explores the scope of and careers in the agricultural electrification industry.
- 280 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 281 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 282 Standard:** Demonstrates safety practices related to electrification.
- 284 Standard:** Develops computer skills relevant to the agricultural electrification industry.
- 285 Standard:** Develops skills needed for employment in the agricultural electrification industry.
- 286 Standard:** Develops management skills relevant to the agricultural electrification industry.
- 287 Standard:** Identifies the principles and applications of electrical power.
- 288 Standard:** Designs electrical systems using the national electric code.
- 289 Standard:** Estimates electrical materials, equipment and costs.
- 292 Standard:** Installs lighting fixtures.
- 294 Standard:** Installs switch boxes and outlet boxes.
- 295 Standard:** Roughs in feeder and branch circuit cables.
- 297 Standard:** Installs and services electrical controls and devices.
- 299 Standard:** Installs and operates electric motors and controls.
- 301 Standard:** Develops math, reading and writing skills as they relate to the agricultural machinery, equipment and tractor industry.
- 302 Standard:** Explores the scope of and careers in the agricultural machinery, equipment and tractor industry.
- 303 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 304 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 305 Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 306 Standard:** Develops record-keeping skills.
- 307 Standard:** Develops computer skills relevant to the agricultural machinery, equipment and tractor industry.
- 309 Standard:** Develops management skills relevant to the agricultural machinery, equipment and tractor industry.

- 312 **Standard:** Performs tractor maintenance.
- 344 **Standard:** Explores the scope of and careers in the plant production industry.
- 366 **Standard:** Explores the scope of and careers in the agricultural products and processing industry.
- 413 **Standard:** Explores the scope of and careers in the natural resource industry.
- 431 **Standard:** Explores the scope of and careers in the floriculture industry.
- 451 **Standard:** Explores the scope of and careers in the floral design and management industry.
- 469 **Standard:** Explores the scope of and careers in the nursery production and management industry.

## Course: Agricultural Mechanics Technology II

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- 190 **Standard:** Develops math, reading and writing skills as they relate to the small engine industry.
- 194 **Standard:** Demonstrates safety practices related to small engines.
- 195 **Standard:** Develops record-keeping skills.
- 197 **Standard:** Develops skills needed for employment in the small engine industry.
- 198 **Standard:** Develops management skills relevant to the small engine industry.
- 199 **Standard:** Identifies small engine types and parts.
- 200 **Standard:** Explains the principles of internal combustion engines.
- 201 **Standard:** Performs seasonal/routine service for small engines.
- 202 **Standard:** Maintains the small engine fuel system.
- 203 **Standard:** Maintains charging and starting systems.
- 204 **Standard:** Maintains the ignition system.
- 205 **Standard:** Overhauls the small engine.
- 206 **Standard:** Maintains cutting devices.
- 207 **Standard:** Develops math, reading and writing skills as they relate to the metal fabrication industry.
- 213 **Standard:** Develops computer skills relevant to the metal fabrication industry.
- 214 **Standard:** Develops skills needed for employment in the metal fabrication industry.
- 215 **Standard:** Develops management skills relevant to the metal fabrication industry.
- 216 **Standard:** Uses measuring instruments in metal fabrication.
- 217 **Standard:** Sets up welding and cutting equipment.
- 218 **Standard:** Identifies the properties of metals.
- 219 **Standard:** Performs welding and cutting operations in a safe and efficient manner.
- 220 **Standard:** Operates metal fabrication tools.
- 221 **Standard:** Performs soldering operations.
- 222 **Standard:** Performs metal threading operations.
- 223 **Standard:** Operates the hydraulic iron worker safely and efficiently.
- 224 **Standard:** Operates the drill press safely and efficiently.
- 225 **Standard:** Operates grinders safely and efficiently.
- 226 **Standard:** Operates power metal saws safely and efficiently.

- 227 Standard:** Develops math, reading and writing skills as they relate to the concrete construction industry.
- 229 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 230 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 231 Standard:** Demonstrates safety practices related to concrete work.
- 232 Standard:** Develops record-keeping skills.
- 234 Standard:** Develops skills needed for employment in the concrete construction industry.
- 235 Standard:** Develops management skills relevant to the concrete construction industry.
- 236 Standard:** Estimates concrete construction and material costs.
- 237 Standard:** Identifies the physical and chemical properties of concrete.
- 238 Standard:** Prepares a concrete construction job.
- 239 Standard:** Constructs concrete forms and reinforcement.
- 240 Standard:** Mixes and pours concrete.
- 241 Standard:** Finishes poured concrete surfaces.
- 242 Standard:** Maintains concrete hand tools and power equipment.
- 243 Standard:** Develops math, reading and writing skills as they relate to the agricultural building construction industry.
- 247 Standard:** Demonstrates safety practices related to building construction.
- 248 Standard:** Describes safety rules and first-aid procedures.
- 249 Standard:** Develops record-keeping skills.
- 250 Standard:** Develops computer skills relevant to the agricultural building construction industry.
- 252 Standard:** Uses wood working and other construction tools safely and efficiently.
- 253 Standard:** Develops management skills relevant to the agricultural building construction industry.
- 254 Standard:** Identifies the principles of building design and construction.
- 257 Standard:** Prepares a building site.
- 258 Standard:** Maintains and stores wood-working and other construction tools.
- 259 Standard:** Installs rough framing.
- 264 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 266 Standard:** Demonstrates safety practices related to irrigation and plumbing.
- 267 Standard:** Develops record-keeping skills.
- 268 Standard:** Develops computer skills relevant to the irrigation and plumbing industry.
- 269 Standard:** Develops skills needed for employment in the irrigation and plumbing industry.
- 270 Standard:** Develops management skills relevant to the irrigation and plumbing industry.
- 271 Standard:** Designs irrigation and plumbing systems for agricultural applications.
- 272 Standard:** Selects irrigation and plumbing materials and tools.
- 273 Standard:** Estimates irrigation and plumbing materials cost.
- 274 Standard:** Lays out irrigation and plumbing jobs.
- 275 Standard:** Cuts and joins pipe.
- 276 Standard:** Installs irrigation and plumbing systems.

- 277 Standard:** Maintains and repairs irrigation and plumbing.
- 278 Standard:** Develops math, reading and writing skills as they relate to the agricultural electrification industry.
- 280 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 282 Standard:** Demonstrates safety practices related to electrification.
- 283 Standard:** Develops record-keeping skills.
- 284 Standard:** Develops computer skills relevant to the agricultural electrification industry.
- 285 Standard:** Develops skills needed for employment in the agricultural electrification industry.
- 286 Standard:** Develops management skills relevant to the agricultural electrification industry.
- 287 Standard:** Identifies the principles and applications of electrical power.
- 288 Standard:** Designs electrical systems using the national electric code.
- 289 Standard:** Estimates electrical materials, equipment and costs.
- 290 Standard:** Computes electrical service loads.
- 291 Standard:** Calculates electrical measurements.
- 292 Standard:** Installs lighting fixtures.
- 293 Standard:** Installs electrical service entrance.
- 294 Standard:** Installs switch boxes and outlet boxes.
- 295 Standard:** Roughs in feeder and branch circuit cables.
- 301 Standard:** Develops math, reading and writing skills as they relate to the agricultural machinery, equipment and tractor industry.
- 303 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 305 Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 306 Standard:** Develops record-keeping skills.
- 307 Standard:** Develops computer skills relevant to the agricultural machinery, equipment and tractor industry.
- 308 Standard:** Develops skills needed for employment in the agricultural machinery, equipment and tractor industry.
- 309 Standard:** Develops management skills relevant to the agricultural machinery, equipment and tractor industry.
- 311 Standard:** Identifies types of and operates farm tractors and machinery.
- 312 Standard:** Performs tractor maintenance.
- 313 Standard:** Develops math, reading and writing skills as they relate to the soil and water conservation industry.
- 316 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 317 Standard:** Demonstrates safety practices related to soil and water conservation.
- 318 Standard:** Develops record-keeping skills.
- 319 Standard:** Develops computer skills relevant to the soil and water conservation industry.
- 320 Standard:** Develops skills needed for employment in the soil and water conservation industry.
- 321 Standard:** Develops management skills relevant in the soil and water conservation industry.
- 322 Standard:** Surveys a land plot for soil and water conservation practices.
- 323 Standard:** Implements soil and water conservation practices.
- 324 Standard:** Implements drainage and irrigation practices.

## Course: Agricultural Mechanics Technology III

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- 190**     **Standard:** Develops math, reading and writing skills as they relate to the small engine industry.
- 194**     **Standard:** Demonstrates safety practices related to small engines.
- 195**     **Standard:** Develops record-keeping skills.
- 196**     **Standard:** Develops computer skills relevant to the small engine industry.
- 197**     **Standard:** Develops skills needed for employment in the small engine industry.
- 198**     **Standard:** Develops management skills relevant to the small engine industry.
- 199**     **Standard:** Identifies small engine types and parts.
- 200**     **Standard:** Explains the principles of internal combustion engines.
- 205**     **Standard:** Overhauls the small engine.
- 206**     **Standard:** Maintains cutting devices.
- 207**     **Standard:** Develops math, reading and writing skills as they relate to the metal fabrication industry.
- 211**     **Standard:** Demonstrates safety practices related to metal working.
- 214**     **Standard:** Develops skills needed for employment in the metal fabrication industry.
- 215**     **Standard:** Develops management skills relevant to the metal fabrication industry.
- 217**     **Standard:** Sets up welding and cutting equipment.
- 219**     **Standard:** Performs welding and cutting operations in a safe and efficient manner.
- 221**     **Standard:** Performs soldering operations.
- 243**     **Standard:** Develops math, reading and writing skills as they relate to the agricultural building construction industry.
- 245**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 247**     **Standard:** Demonstrates safety practices related to building construction.
- 248**     **Standard:** Describes safety rules and first-aid procedures.
- 249**     **Standard:** Develops record-keeping skills.
- 250**     **Standard:** Develops computer skills relevant to the agricultural building construction industry.
- 251**     **Standard:** Develops skills needed for employment in the agricultural construction industry.
- 252**     **Standard:** Uses wood working and other construction tools safely and efficiently.
- 253**     **Standard:** Develops management skills relevant to the agricultural building construction industry.
- 254**     **Standard:** Identifies the principles of building design and construction.
- 255**     **Standard:** Selects a building site.
- 256**     **Standard:** Estimates building construction materials and costs.
- 257**     **Standard:** Prepares a building site.
- 258**     **Standard:** Maintains and stores wood-working and other construction tools.
- 259**     **Standard:** Installs rough framing.
- 260**     **Standard:** Installs building roof components.
- 261**     **Standard:** Installs building exterior finishes.
- 278**     **Standard:** Develops math, reading and writing skills as they relate to the agricultural electrification industry.

- 280**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 283**     **Standard:** Develops record-keeping skills.
- 284**     **Standard:** Develops computer skills relevant to the agricultural electrification industry.
- 285**     **Standard:** Develops skills needed for employment in the agricultural electrification industry.
- 287**     **Standard:** Identifies the principles and applications of electrical power.
- 297**     **Standard:** Installs and services electrical controls and devices.
- 298**     **Standard:** Sizes and selects electric motors and controls.
- 299**     **Standard:** Installs and operates electric motors and controls.
- 300**     **Standard:** Tests, troubleshoots and maintains electrical motors and controls.
- 301**     **Standard:** Develops math, reading and writing skills as they relate to the agricultural machinery, equipment and tractor industry.
- 305**     **Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 306**     **Standard:** Develops record-keeping skills.
- 307**     **Standard:** Develops computer skills relevant to the agricultural machinery, equipment and tractor industry.
- 308**     **Standard:** Develops skills needed for employment in the agricultural machinery, equipment and tractor industry.
- 310**     **Standard:** Services mechanical components of sprayers.
- 311**     **Standard:** Identifies types of and operates farm tractors and machinery.

## Course: Agriculture Animal Production and Management

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- 325**     **Standard:** Develops math, reading and writing skills as they relate to the animal production industry.
- 327**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 328**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 332**     **Standard:** Develops employability skills.
- 333**     **Standard:** Develops management skills relevant to the animal production industry.
- 334**     **Standard:** Determines the impact of government rules and regulations on the animal production industry.
- 335**     **Standard:** Develops skills and abilities in selected practices of beef production.
- 336**     **Standard:** Develops skills and abilities in selected practices of dairy production.
- 337**     **Standard:** Develops skills and abilities in selected practices of equine production.
- 338**     **Standard:** Develops skills and abilities in selected practices of swine production.
- 339**     **Standard:** Develops skills and abilities in selected practices of sheep production.
- 340**     **Standard:** Develops skills and abilities in selected practices of poultry production.
- 341**     **Standard:** Develops skills in showing, fitting and selecting livestock.
- 342**     **Standard:** Develops skills and abilities in selected practices of specialty animal production.

## Course: Agriculture Crop Production and Management

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- 343**     **Standard:** Develops math, reading and writing skills as they relate to the plant production industry.
- 344**     **Standard:** Explores the scope of and careers in the plant production industry.

- 345 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 346 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 347 Standard:** Demonstrates safety practices related to plant production and management.
- 348 Standard:** Develops record-keeping skills.
- 349 Standard:** Develops computer skills relevant to the plant production industry.
- 351 Standard:** Develops management skills relevant to the plant production industry.
- 352 Standard:** Identifies and describes the process of plant growth.
- 353 Standard:** Determines the impact of government rules and regulations on plant production enterprises.
- 354 Standard:** Determines the impact and process of crop improvement.
- 355 Standard:** Develops skills and abilities in selected practices of pasture production.
- 356 Standard:** Develops skills and abilities in selected practices of grain crop production.
- 357 Standard:** Develops skills and abilities in selected practices of sugar crop production.
- 358 Standard:** Develops skill and abilities in selected practices in forage crop production.
- 360 Standard:** Develops skills and abilities in selected practices of oil crop production.
- 361 Standard:** Develops skills and abilities in selected practices of fruit, nut and berry production.
- 362 Standard:** Develops skills and abilities in selected practices of fiber crop production.
- 363 Standard:** Develops skills and abilities in selected practices of specialty crop production.
- 364 Standard:** Identifies and describes the process, principles and use of integrated pest management.

## Course: Basic Agricultural Science and Technology

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- 30 Standard:** Develops skills in selected practices that relate to the environmental horticulture industry.
- 37 Standard:** Develops math, reading and writing skills as they relate to the agribusiness industry.
- 41 Standard:** Develops record-keeping skills.
- 42 Standard:** Develops computer skills in agribusiness.
- 43 Standard:** Develops skills needed for employment in the agribusiness industry.
- 50 Standard:** Develops math, reading and writing skills as they relate to the agribusiness industry.
- 59 Standard:** Conducts and interprets a feasibility study for starting an agribusiness in a selected area of agriculture.
- 64 Standard:** Manages and protects financial resources.
- 81 Standard:** Develops math, reading and writing skills as they relate to animal science.
- 83 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 85 Standard:** Demonstrates safety practices related to animal science and biotechnology.
- 86 Standard:** Develops record-keeping skills.
- 88 Standard:** Describes the scientific foundations of animal agriculture and biotechnology.
- 89 Standard:** Explains the scientific foundations of large animal production and management.
- 90 Standard:** Explains the scientific foundations of poultry science.
- 91 Standard:** Explains the scientific foundations of dairy production processing and management.
- 92 Standard:** Explains the scientific foundations of aquaculture production and management.

- 93 Standard:** Explains the scientific foundations of alternative agriculture animal production and management.
- 94 Standard:** Classifies agricultural animals.
- 95 Standard:** Identifies consumer and environmental concerns in animal production and management.
- 96 Standard:** Identifies and explains the issues of animal welfare.
- 97 Standard:** Uses animal behavior to facilitate the safe, efficient and humane management and movement of animals.
- 98 Standard:** Explains and applies the principles of animal genetics and bioengineering.
- 99 Standard:** Selects agricultural animals on the basis of scientific and research data.
- 100 Standard:** Describes and applies the underlying principles of animal reproduction to the management and production of agricultural animals.
- 101 Standard:** Describes the underlying scientific principles of animal growth and development.
- 102 Standard:** Applies the principles of animal nutrition to the production and management of animals.
- 103 Standard:** Explains the application of the principles of meat science to the safe, efficient and economical delivery of meat products to the consumer.
- 104 Standard:** Identifies and describes parasites that attack agricultural animals.
- 105 Standard:** Identifies and characterizes diseases that attack agricultural animals.
- 106 Standard:** Develops math, reading and writing skills as they relate to plant science and biotechnology.
- 107 Standard:** Explores the scope of and careers in the plant science and biotechnology industry.
- 108 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 110 Standard:** Develops record-keeping skills.
- 111 Standard:** Develops computer skills relevant to plant science and biotechnology.
- 112 Standard:** Defines plant science and biotechnology skills needed in the industry.
- 113 Standard:** Classifies plants according to the scientific classification system.
- 114 Standard:** Describes the form and function of plant vegetative structures.
- 115 Standard:** Identifies and describes the processes of plant cells.
- 117 Standard:** Explains how plants use nutrients.
- 118 Standard:** Characterizes the components of soils and how they relate to plant health and artificial growing media.
- 119 Standard:** Identifies the processes of plant reproduction.
- 120 Standard:** Identifies plant genetic structures and their functions.
- 121 Standard:** Describes environmental factors that affect plant growth and their manipulation in the production of plants.
- 122 Standard:** Explains the importance of plants to life, the economy and the environment.
- 123 Standard:** Describes the economic and environmental impact of weeds.
- 124 Standard:** Describes the economic impact of insects on the plant industry.
- 125 Standard:** Identifies and characterizes pathological disorders of plants.
- 126 Standard:** Diagrams and explains the use and functions of water in plants.
- 127 Standard:** Identifies and describes components of commercial plant growth systems used in the plant industry.
- 128 Standard:** Explains how plants affect the environment.
- 129 Standard:** Develops math, reading and writing skills as they relate to food, science and safety.
- 130 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.

- 131 Standard:** Explores the scope of and career opportunities in the food science and safety industry.
- 133 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 140 Standard:** Illustrates how the food industry utilizes biotechnology in the safe, efficient and economical production of food products.
- 148 Standard:** Develops math, reading and writing skills as they relate to environmental science.
- 150 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 151 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 153 Standard:** Develops record-keeping skills.
- 155 Standard:** Describes the relationships among humans, agriculture and the environment.
- 156 Standard:** Explains how agriculture affects ecosystems.
- 157 Standard:** Identifies the types and proper management of agricultural waste products.
- 158 Standard:** Describes the use of agricultural chemicals and their effects on the environment.
- 160 Standard:** Lists and describes management practices used in agriculture to protect air quality.
- 161 Standard:** Develops math, reading and writing skills as they relate to forestry and natural resources.
- 163 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 164 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 166 Standard:** Develops record-keeping skills.
- 168 Standard:** Identifies and lists uses and characteristics of natural resources.
- 169 Standard:** Describes the origin and composition of soils.
- 170 Standard:** Prescribes measures that will reduce the chance of soil depletion and foster soil stewardship.
- 175 Standard:** Develops math, reading and writing skills as they relate to physical science applications in the agricultural mechanization industry.
- 177 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 178 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 180 Standard:** Develops record-keeping skills.
- 182 Standard:** Illustrates the use, measurement and control of power systems in agriculture.
- 183 Standard:** Compares and contrasts alternative energy sources for agricultural purposes.
- 184 Standard:** Defines electrical power and describes its uses in agriculture.
- 185 Standard:** Illustrates the use of agricultural power and machinery controls to manipulate the environment for plant and animal production.
- 187 Standard:** Describes the principles and practices of internal combustion engines in agriculture.
- 365 Standard:** Develops math, reading and writing skills as they relate to the agricultural products and processing industry.
- 369 Standard:** Demonstrates safety practices related to agricultural products processing.
- 370 Standard:** Develops record-keeping skills.
- 374 Standard:** Determines the impact of government rules and regulations on food products and processing enterprises.
- 376 Standard:** Develops skills in agricultural processing and storage techniques.
- 377 Standard:** Identifies equipment used in agricultural processing and storage.
- 379 Standard:** Develops skills in fiber processing.

**440**      **Standard:** Identifies and selects horticultural supplies.

**446**      **Standard:** Controls pests of floriculture crops.

## Course: Cooperative Agribusiness Sales and Marketing

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**60**      **Standard:** Identifies the problems and scope of management in agribusiness.

**65**      **Standard:** Develops math, reading and writing skills as they relate to the agribusiness sales and service industry.

**66**      **Standard:** Explores the scope of and careers in the agribusiness sales and service industry.

**67**      **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.

**69**      **Standard:** Demonstrates safety practices related to agribusiness sales and service.

**70**      **Standard:** Develops record-keeping skills.

**71**      **Standard:** Develops computer skills in agribusiness sales and service.

**72**      **Standard:** Develops skills needed for employment in the sales and service industry of agriculture.

**73**      **Standard:** Develops management skills in agribusiness sales and service.

**74**      **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.

**75**      **Standard:** Identifies the availability of agricultural jobs and the pay, working conditions and worker benefits of each.

**76**      **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.

**77**      **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.

**78**      **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.

**79**      **Standard:** Competitively prices agricultural products and services.

**80**      **Standard:** Determines credit eligibility of customers.

**430**      **Standard:** Develops math, reading and writing skills as they relate to the floriculture industry.

**442**      **Standard:** Selects greenhouse growing media and applies fertilizers.

## Course: Environmental Science

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**148**      **Standard:** Develops math, reading and writing skills as they relate to environmental science.

**149**      **Standard:** Explores the scope of and careers in the environmental science industry.

**150**      **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.

**151**      **Standard:** Demonstrates skills in developing a supervised agricultural experience program.

**152**      **Standard:** Demonstrates safety practices related to environmental science.

**153**      **Standard:** Develops record-keeping skills.

**154**      **Standard:** Develops computer skills relevant to environmental science.

**155**      **Standard:** Describes the relationships among humans, agriculture and the environment.

**156**      **Standard:** Explains how agriculture affects ecosystems.

**157**      **Standard:** Identifies the types and proper management of agricultural waste products.

**158**      **Standard:** Describes the use of agricultural chemicals and their effects on the environment.

- 159 Standard:** Lists and describes management practices used in agriculture to protect soil and water resources.
- 160 Standard:** Lists and describes management practices used in agriculture to protect air quality.
- 421 Standard:** Gathers and analyzes field data for soil and water conservation plans.
- 423 Standard:** Reads maps, aerial photographs and legal land descriptions.

## Course: Floral Design and Management

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- 450 Standard:** Develops math, reading and writing skills as they relate to the floral design and management industry.
- 451 Standard:** Explores the scope of and careers in the floral design and management industry.
- 452 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 453 Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 454 Standard:** Demonstrates safety practices related to floral design and management.
- 455 Standard:** Develops record-keeping skills.
- 457 Standard:** Develops employability skills.
- 458 Standard:** Develops management skills relevant to the floral design and management industry.
- 459 Standard:** Identifies and describes plants, cut flowers, greens and other materials used in the florist industry.
- 460 Standard:** Receives and stores floral perishable and hard good products.
- 461 Standard:** Prepares and prices basic floral designs.
- 462 Standard:** Prepares and prices flowers to wear.
- 463 Standard:** Prepares and prices specialty designs.
- 464 Standard:** Prepares and prices floral decorations for special occasions and purposes.
- 465 Standard:** Markets floral products.
- 466 Standard:** Prepares and prices sympathy flowers.
- 467 Standard:** Prepares and prices plants for sale.
- 468 Standard:** Develops math, reading and writing skills as they relate to the nursery production and management industry.
- 475 Standard:** Develops skills needed for employment in nursery production and management.
- 476 Standard:** Develops management skills relevant to the nursery production industry.
- 477 Standard:** Identifies, selects and maintains nursery structures and equipment.
- 478 Standard:** Identifies and selects nursery supplies.
- 479 Standard:** Selects and schedules the production of nursery and turf crops.
- 480 Standard:** Propagates nursery and turf crops through sexual and asexual methods.
- 481 Standard:** Manages nursery growing media and soil fertility.
- 483 Standard:** Manages turf and nursery crops.
- 484 Standard:** Harvests and transports turf and nursery crops.
- 485 Standard:** Develops salesmanship skills for telephone and face to face sales.

## Course: Floriculture Production and Management

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- 58**     **Standard:** Develops basic knowledge in organizing an agricultural business.
- 60**     **Standard:** Identifies the problems and scope of management in agribusiness.
- 61**     **Standard:** Keeps and uses financial records to analyze and solve management problems.
- 74**     **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 76**     **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.
- 77**     **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78**     **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79**     **Standard:** Competitively prices agricultural products and services.
- 80**     **Standard:** Determines credit eligibility of customers.
- 106**    **Standard:** Develops math, reading and writing skills as they relate to plant science and biotechnology.
- 112**    **Standard:** Defines plant science and biotechnology skills needed in the industry.
- 123**    **Standard:** Describes the economic and environmental impact of weeds.
- 124**    **Standard:** Describes the economic impact of insects on the plant industry.
- 430**    **Standard:** Develops math, reading and writing skills as they relate to the floriculture industry.
- 432**    **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 434**    **Standard:** Demonstrates safety practices related to floriculture.
- 435**    **Standard:** Develops record-keeping skills.
- 439**    **Standard:** Selects and maintains floriculture structures and equipment.
- 440**    **Standard:** Identifies and selects horticultural supplies.
- 441**    **Standard:** Selects and schedules floriculture crops.
- 442**    **Standard:** Selects greenhouse growing media and applies fertilizers.
- 443**    **Standard:** Propagates floriculture crops.
- 444**    **Standard:** Plants and transplants floriculture crops.
- 445**    **Standard:** Produces floriculture crops.
- 446**    **Standard:** Controls pests of floriculture crops.
- 447**    **Standard:** Prepares floriculture products for sale.
- 448**    **Standard:** Markets floriculture crops.
- 449**    **Standard:** Identifies and selects floriculture plants.
- 450**    **Standard:** Develops math, reading and writing skills as they relate to the floral design and management industry.
- 458**    **Standard:** Develops management skills relevant to the floral design and management industry.
- 459**    **Standard:** Identifies and describes plants, cut flowers, greens and other materials used in the florist industry.
- 461**    **Standard:** Prepares and prices basic floral designs.
- 464**    **Standard:** Prepares and prices floral decorations for special occasions and purposes.
- 465**    **Standard:** Markets floral products.

## Course: Forest Science

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- 58**     **Standard:** Develops basic knowledge in organizing an agricultural business.
- 60**     **Standard:** Identifies the problems and scope of management in agribusiness.
- 61**     **Standard:** Keeps and uses financial records to analyze and solve management problems.
- 62**     **Standard:** Develops and analyzes short- and long-range management plans for agribusiness's.
- 64**     **Standard:** Manages and protects financial resources.
- 76**     **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.
- 77**     **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78**     **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79**     **Standard:** Competitively prices agricultural products and services.
- 165**    **Standard:** Demonstrates safety practices related to forestry and natural resources.
- 168**    **Standard:** Identifies and lists uses and characteristics of natural resources.
- 169**    **Standard:** Describes the origin and composition of soils.
- 170**    **Standard:** Prescribes measures that will reduce the chance of soil depletion and foster soil stewardship.
- 171**    **Standard:** Describes the importance of forestry to the environment and the economy.
- 172**    **Standard:** Develops a plan for maintaining a healthy forest.
- 173**    **Standard:** Lists and characterizes products made from forest resources.
- 174**    **Standard:** Defines principles used in the management and conservation of wildlife.
- 380**    **Standard:** Develops math, reading and writing skills as they relate to the forest production and management industry.
- 384**    **Standard:** Demonstrates safety practices related to forest production and management.
- 385**    **Standard:** Develops record-keeping skills.
- 386**    **Standard:** Develops computer skills relevant to the forest production and management industry.
- 387**    **Standard:** Develops skills needed for employment in the forestry production and management industry.
- 388**    **Standard:** Develops management skills relevant to the forest production and management industry.
- 389**    **Standard:** Identifies trees.
- 390**    **Standard:** Evaluates sites for forestry production.
- 391**    **Standard:** Prepares a site for reforestation.
- 392**    **Standard:** Procures seeds and seedlings for reforestation.
- 398**    **Standard:** Controls forest insects and diseases.
- 400**    **Standard:** Determines the growth rate of trees.
- 401**    **Standard:** Evaluates timber stands for thinning.
- 402**    **Standard:** Reads maps of forest areas to be harvested.
- 403**    **Standard:** Determines boundaries of forest areas to be harvested.
- 404**    **Standard:** Cruises timber.
- 408**    **Standard:** Identifies methods of harvesting, loading and transporting timber.

- 409 **Standard:** Measures forest products.
- 410 **Standard:** Manages forests for efficient production.
- 411 **Standard:** Identifies methods of producing and marketing naval stores.
- 425 **Standard:** Identifies fish, wildlife and plants.

## Course: Forestry

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- 45 **Standard:** Develops competency in a specific employment area of the agribusiness industry.
- 60 **Standard:** Identifies the problems and scope of management in agribusiness.
- 62 **Standard:** Develops and analyzes short- and long-range management plans for agribusiness's.
- 74 **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 75 **Standard:** Identifies the availability of agricultural jobs and the pay, working conditions and worker benefits of each.
- 76 **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.
- 77 **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78 **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79 **Standard:** Competitively prices agricultural products and services.
- 161 **Standard:** Develops math, reading and writing skills as they relate to forestry and natural resources.
- 162 **Standard:** Explores the scope of and careers in the forestry and natural resources industry.
- 163 **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 165 **Standard:** Demonstrates safety practices related to forestry and natural resources.
- 166 **Standard:** Develops record-keeping skills.
- 167 **Standard:** Develops computer skills relevant to natural resources.
- 168 **Standard:** Identifies and lists uses and characteristics of natural resources.
- 169 **Standard:** Describes the origin and composition of soils.
- 170 **Standard:** Prescribes measures that will reduce the chance of soil depletion and foster soil stewardship.
- 171 **Standard:** Describes the importance of forestry to the environment and the economy.
- 172 **Standard:** Develops a plan for maintaining a healthy forest.
- 173 **Standard:** Lists and characterizes products made from forest resources.
- 174 **Standard:** Defines principles used in the management and conservation of wildlife.
- 384 **Standard:** Demonstrates safety practices related to forest production and management.
- 385 **Standard:** Develops record-keeping skills.
- 388 **Standard:** Develops management skills relevant to the forest production and management industry.
- 389 **Standard:** Identifies trees.
- 391 **Standard:** Prepares a site for reforestation.
- 392 **Standard:** Procures seeds and seedlings for reforestation.
- 393 **Standard:** Establishes a forestry plot.
- 394 **Standard:** Prevents wildfires.

- 395 Standard:** Controls wildfires.
- 396 Standard:** Controls undesirable forest species.
- 397 Standard:** Conducts a prescribed burn.
- 398 Standard:** Controls forest insects and diseases.
- 399 Standard:** Measures standing timber.
- 400 Standard:** Determines the growth rate of trees.
- 401 Standard:** Evaluates timber stands for thinning.
- 402 Standard:** Reads maps of forest areas to be harvested.
- 412 Standard:** Develops math, reading and writing skills as they relate to the natural resource industry.

## Course: General Horticulture

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- 106 Standard:** Develops math, reading and writing skills as they relate to plant science and biotechnology.
- 110 Standard:** Develops record-keeping skills.
- 111 Standard:** Develops computer skills relevant to plant science and biotechnology.
- 115 Standard:** Identifies and describes the processes of plant cells.
- 117 Standard:** Explains how plants use nutrients.
- 118 Standard:** Characterizes the components of soils and how they relate to plant health and artificial growing media.
- 119 Standard:** Identifies the processes of plant reproduction.
- 121 Standard:** Describes environmental factors that affect plant growth and their manipulation in the production of plants.
- 122 Standard:** Explains the importance of plants to life, the economy and the environment.
- 126 Standard:** Diagrams and explains the use and functions of water in plants.
- 127 Standard:** Identifies and describes components of commercial plant growth systems used in the plant industry.
- 128 Standard:** Explains how plants affect the environment.
- 194 Standard:** Demonstrates safety practices related to small engines.
- 305 Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 347 Standard:** Demonstrates safety practices related to plant production and management.
- 430 Standard:** Develops math, reading and writing skills as they relate to the floriculture industry.
- 431 Standard:** Explores the scope of and careers in the floriculture industry.
- 432 Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 435 Standard:** Develops record-keeping skills.
- 436 Standard:** Develops computer skills relevant to the floriculture industry.
- 437 Standard:** Develops skills needed for employment in the floriculture industry.
- 438 Standard:** Develops management skills relevant to the floriculture industry.
- 439 Standard:** Selects and maintains floriculture structures and equipment.
- 440 Standard:** Identifies and selects horticultural supplies.
- 441 Standard:** Selects and schedules floriculture crops.
- 442 Standard:** Selects greenhouse growing media and applies fertilizers.

- 443 **Standard:** Propagates floriculture crops.
- 445 **Standard:** Produces floriculture crops.
- 446 **Standard:** Controls pests of floriculture crops.
- 448 **Standard:** Markets floriculture crops.
- 449 **Standard:** Identifies and selects floriculture plants.
- 459 **Standard:** Identifies and describes plants, cut flowers, greens and other materials used in the florist industry.
- 472 **Standard:** Demonstrates safety practices related to nursery production and management.
- 486 **Standard:** Develops math, reading and writing skills as they relate to the landscape design and management industry.
- 490 **Standard:** Demonstrates safety practices related to landscape operations.
- 491 **Standard:** Develops record-keeping skills.
- 493 **Standard:** Develops skills needed for employment in the landscape design and management industry.
- 494 **Standard:** Develops management skills relevant to the landscape industry.
- 496 **Standard:** Designs residential and commercial landscapes.
- 497 **Standard:** Establishes landscapes.
- 498 **Standard:** Selects and maintains landscape equipment.
- 499 **Standard:** Manages landscape soils, fertility and water.
- 500 **Standard:** Manages plants in the landscape.
- 501 **Standard:** Controls pests in the landscape.
- 502 **Standard:** Identifies and selects plants for the landscape.

## Course: Introduction to Animal Science / Biotechnology

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- 81 **Standard:** Develops math, reading and writing skills as they relate to animal science.
- 82 **Standard:** Explores the scope of and careers in the animal science and biotechnology industry.
- 84 **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 86 **Standard:** Develops record-keeping skills.
- 87 **Standard:** Develops computer skills relevant to agriscience and biotechnology.
- 88 **Standard:** Describes the scientific foundations of animal agriculture and biotechnology.
- 89 **Standard:** Explains the scientific foundations of large animal production and management.
- 90 **Standard:** Explains the scientific foundations of poultry science.
- 91 **Standard:** Explains the scientific foundations of dairy production processing and management.
- 93 **Standard:** Explains the scientific foundations of alternative agriculture animal production and management.
- 94 **Standard:** Classifies agricultural animals.
- 95 **Standard:** Identifies consumer and environmental concerns in animal production and management.
- 96 **Standard:** Identifies and explains the issues of animal welfare.
- 97 **Standard:** Uses animal behavior to facilitate the safe, efficient and humane management and movement of animals.
- 98 **Standard:** Explains and applies the principles of animal genetics and bioengineering.
- 99 **Standard:** Selects agricultural animals on the basis of scientific and research data.

- 100**     **Standard:** Describes and applies the underlying principles of animal reproduction to the management and production of agricultural animals.
- 101**     **Standard:** Describes the underlying scientific principles of animal growth and development.
- 102**     **Standard:** Applies the principles of animal nutrition to the production and management of animals.
- 103**     **Standard:** Explains the application of the principles of meat science to the safe, efficient and economical delivery of meat products to the consumer.
- 104**     **Standard:** Identifies and describes parasites that attack agricultural animals.
- 105**     **Standard:** Identifies and characterizes diseases that attack agricultural animals.

## Course: Landscape Design and Management

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- 74**     **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 76**     **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.
- 77**     **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78**     **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79**     **Standard:** Competitively prices agricultural products and services.
- 80**     **Standard:** Determines credit eligibility of customers.
- 194**     **Standard:** Demonstrates safety practices related to small engines.
- 305**     **Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 347**     **Standard:** Demonstrates safety practices related to plant production and management.
- 468**     **Standard:** Develops math, reading and writing skills as they relate to the nursery production and management industry.
- 472**     **Standard:** Demonstrates safety practices related to nursery production and management.
- 477**     **Standard:** Identifies, selects and maintains nursery structures and equipment.
- 479**     **Standard:** Selects and schedules the production of nursery and turf crops.
- 481**     **Standard:** Manages nursery growing media and soil fertility.
- 482**     **Standard:** Plants and transplants nursery crops.
- 483**     **Standard:** Manages turf and nursery crops.
- 486**     **Standard:** Develops math, reading and writing skills as they relate to the landscape design and management industry.
- 487**     **Standard:** Explores the scope of and careers in the landscape design and management industry.
- 488**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 489**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 490**     **Standard:** Demonstrates safety practices related to landscape operations.
- 491**     **Standard:** Develops record-keeping skills.
- 492**     **Standard:** Develops computer skills relevant to the landscape design and management industry.
- 493**     **Standard:** Develops skills needed for employment in the landscape design and management industry.
- 494**     **Standard:** Develops management skills relevant to the landscape industry.
- 495**     **Standard:** Markets landscape design services.

- 496**     **Standard:** Designs residential and commercial landscapes.
- 497**     **Standard:** Establishes landscapes.
- 498**     **Standard:** Selects and maintains landscape equipment.
- 499**     **Standard:** Manages landscape soils, fertility and water.
- 500**     **Standard:** Manages plants in the landscape.
- 501**     **Standard:** Controls pests in the landscape.
- 502**     **Standard:** Identifies and selects plants for the landscape.

## Course: Natural Resources Conservation

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- 148**     **Standard:** Develops math, reading and writing skills as they relate to environmental science.
- 149**     **Standard:** Explores the scope of and careers in the environmental science industry.
- 150**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 151**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 154**     **Standard:** Develops computer skills relevant to environmental science.
- 155**     **Standard:** Describes the relationships among humans, agriculture and the environment.
- 156**     **Standard:** Explains how agriculture affects ecosystems.
- 157**     **Standard:** Identifies the types and proper management of agricultural waste products.
- 158**     **Standard:** Describes the use of agricultural chemicals and their effects on the environment.
- 159**     **Standard:** Lists and describes management practices used in agriculture to protect soil and water resources.
- 160**     **Standard:** Lists and describes management practices used in agriculture to protect air quality.
- 161**     **Standard:** Develops math, reading and writing skills as they relate to forestry and natural resources.
- 162**     **Standard:** Explores the scope of and careers in the forestry and natural resources industry.
- 166**     **Standard:** Develops record-keeping skills.
- 167**     **Standard:** Develops computer skills relevant to natural resources.
- 168**     **Standard:** Identifies and lists uses and characteristics of natural resources.
- 169**     **Standard:** Describes the origin and composition of soils.
- 170**     **Standard:** Prescribes measures that will reduce the chance of soil depletion and foster soil stewardship.
- 171**     **Standard:** Describes the importance of forestry to the environment and the economy.
- 172**     **Standard:** Develops a plan for maintaining a healthy forest.
- 173**     **Standard:** Lists and characterizes products made from forest resources.
- 174**     **Standard:** Defines principles used in the management and conservation of wildlife.
- 175**     **Standard:** Develops math, reading and writing skills as they relate to physical science applications in the agricultural mechanization industry.
- 182**     **Standard:** Illustrates the use, measurement and control of power systems in agriculture.
- 183**     **Standard:** Compares and contrasts alternative energy sources for agricultural purposes.
- 184**     **Standard:** Defines electrical power and describes its uses in agriculture.
- 380**     **Standard:** Develops math, reading and writing skills as they relate to the forest production and management industry.

- 383**     **Standard:** Demonstrates skills in developing a supervised agricultural experience program.
- 388**     **Standard:** Develops management skills relevant to the forest production and management industry.
- 389**     **Standard:** Identifies trees.
- 390**     **Standard:** Evaluates sites for forestry production.
- 392**     **Standard:** Procures seeds and seedlings for reforestation.
- 394**     **Standard:** Prevents wildfires.
- 395**     **Standard:** Controls wildfires.
- 396**     **Standard:** Controls undesirable forest species.
- 397**     **Standard:** Conducts a prescribed burn.
- 398**     **Standard:** Controls forest insects and diseases.
- 399**     **Standard:** Measures standing timber.
- 400**     **Standard:** Determines the growth rate of trees.
- 412**     **Standard:** Develops math, reading and writing skills as they relate to the natural resource industry.
- 413**     **Standard:** Explores the scope of and careers in the natural resource industry.
- 417**     **Standard:** Develops record-keeping skills.
- 418**     **Standard:** Develops computer skills relevant to the natural resource industry.
- 419**     **Standard:** Develops skills needed for employment in the natural resource industry.
- 420**     **Standard:** Develops management skills relevant to the natural resource industry.
- 421**     **Standard:** Gathers and analyzes field data for soil and water conservation plans.
- 422**     **Standard:** Plans and implements routine conservation practices.
- 423**     **Standard:** Reads maps, aerial photographs and legal land descriptions.
- 425**     **Standard:** Identifies fish, wildlife and plants.
- 427**     **Standard:** Manages fish, wildlife and vegetation.
- 428**     **Standard:** Develops skills in wildlife management, forestry, outdoor recreation and air quality.
- 429**     **Standard:** Explains concepts in natural resources conservation.

## Course: Nursery/Turf Production and Management

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- 74**     **Standard:** Identifies the physical, personal and educational requirements for employment in agribusiness sales and service.
- 76**     **Standard:** Demonstrates proper sales techniques with customers in sales presentations on the telephone and face-to-face.
- 77**     **Standard:** Demonstrates understanding of how to close a sale, reasons potential customers resist buying and how to overcome purchase obstacles.
- 78**     **Standard:** Completes sales tickets, writes checks and fills out shipping forms and other forms.
- 79**     **Standard:** Competitively prices agricultural products and services.
- 80**     **Standard:** Determines credit eligibility of customers.
- 194**     **Standard:** Demonstrates safety practices related to small engines.
- 305**     **Standard:** Demonstrates safety practices related to agricultural machinery and equipment.
- 347**     **Standard:** Demonstrates safety practices related to plant production and management.

- 468**     **Standard:** Develops math, reading and writing skills as they relate to the nursery production and management industry.
- 469**     **Standard:** Explores the scope of and careers in the nursery production and management industry.
- 470**     **Standard:** Develops leadership, communication, citizenship and competitive skills through co-curricular student organization activities.
- 472**     **Standard:** Demonstrates safety practices related to nursery production and management.
- 473**     **Standard:** Develops record-keeping skills.
- 474**     **Standard:** Develops computer skills relevant to the nursery production and management industry.
- 475**     **Standard:** Develops skills needed for employment in nursery production and management.
- 476**     **Standard:** Develops management skills relevant to the nursery production industry.
- 477**     **Standard:** Identifies, selects and maintains nursery structures and equipment.
- 478**     **Standard:** Identifies and selects nursery supplies.
- 479**     **Standard:** Selects and schedules the production of nursery and turf crops.
- 480**     **Standard:** Propagates nursery and turf crops through sexual and asexual methods.
- 481**     **Standard:** Manages nursery growing media and soil fertility.
- 482**     **Standard:** Plants and transplants nursery crops.
- 483**     **Standard:** Manages turf and nursery crops.
- 484**     **Standard:** Harvests and transports turf and nursery crops.
- 485**     **Standard:** Develops salesmanship skills for telephone and face to face sales.
- 490**     **Standard:** Demonstrates safety practices related to landscape operations.

## Course: Physical Science Applications in Agriculture

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- 175**     **Standard:** Develops math, reading and writing skills as they relate to physical science applications in the agricultural mechanization industry.
- 180**     **Standard:** Develops record-keeping skills.
- 181**     **Standard:** Develops computer skills relevant to physical science applications in agriculture.
- 182**     **Standard:** Illustrates the use, measurement and control of power systems in agriculture.
- 184**     **Standard:** Defines electrical power and describes its uses in agriculture.
- 185**     **Standard:** Illustrates the use of agricultural power and machinery controls to manipulate the environment for plant and animal production.
- 186**     **Standard:** Identifies the properties of various metals and methods of joining.
- 187**     **Standard:** Describes the principles and practices of internal combustion engines in agriculture.
- 188**     **Standard:** Evaluates agricultural structures and techniques of construction for various applications.
- 189**     **Standard:** Outlines machine theory and its application in agricultural production and processing.

## Course: Plant Science Biotechnology

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- 106**     **Standard:** Develops math, reading and writing skills as they relate to plant science and biotechnology.
- 107**     **Standard:** Explores the scope of and careers in the plant science and biotechnology industry.

- 110**      **Standard:** Develops record-keeping skills.
- 111**      **Standard:** Develops computer skills relevant to plant science and biotechnology.
- 112**      **Standard:** Defines plant science and biotechnology skills needed in the industry.
- 113**      **Standard:** Classifies plants according to the scientific classification system.
- 114**      **Standard:** Describes the form and function of plant vegetative structures.
- 115**      **Standard:** Identifies and describes the processes of plant cells.
- 116**      **Standard:** Describes how industry manipulates science and technology to produce superior ornamental and food plants.
- 117**      **Standard:** Explains how plants use nutrients.
- 118**      **Standard:** Characterizes the components of soils and how they relate to plant health and artificial growing media.
- 119**      **Standard:** Identifies the processes of plant reproduction.
- 120**      **Standard:** Identifies plant genetic structures and their functions.
- 121**      **Standard:** Describes environmental factors that affect plant growth and their manipulation in the production of plants.
- 122**      **Standard:** Explains the importance of plants to life, the economy and the environment.
- 123**      **Standard:** Describes the economic and environmental impact of weeds.
- 124**      **Standard:** Describes the economic impact of insects on the plant industry.
- 125**      **Standard:** Identifies and characterizes pathological disorders of plants.
- 126**      **Standard:** Diagrams and explains the use and functions of water in plants.
- 127**      **Standard:** Identifies and describes components of commercial plant growth systems used in the plant industry.
- 128**      **Standard:** Explains how plants affect the environment.
- 434**      **Standard:** Demonstrates safety practices related to floriculture.