

Advanced Floral Design & Advanced Plant and Soil Science YAG

Semester 1: Advanced Floral Design | Semester 2: Advanced Plant and Soil Science | 36 Weeks (4 Grading Periods)

TEKS Abbreviations: AFD = §127.57 Advanced Floral Design; APSS = §127.58 Advanced Plant and Soil Science. Semester exams are cumulative. ACCESS may support career exploration, employability, portfolios, research, and extension activities. **APSS must include laboratory/field investigations for at least 40% of instructional time.**

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
1	1–2	Unit 1 – Professional Floral Design, SAE & Leadership	- Advanced floral career/entrepreneurship pathway and certification plan - Professionalism, workplace safety, ethics, legal responsibilities, citizenship - Launch/update SAE with records - Agricultural youth leadership participation and experience documentation	- AFD1(A–E) - AFD2(A–B) - AFD3(A–C)	- ACCESS: career/certification research - FFA/CTSO leadership and service - Professional floral designer interview
1	3–5	Unit 2 – Advanced Design Theory & Contemporary Styles	- Advanced botanical terminology and flower symbolism - Compare contemporary styles: abstract, assemblage, asymmetrical, Biedermeier, cascade, hedgerow, parallel, synergistic, submerged, topiary, vegetative - Sketch/illustrate original concepts - Basing techniques and advanced focal-emphasis techniques	AFD4(A–F)	- Design-style visual portfolio - Trend research and critique - Botanical symbolism reference guide
1	6–9	Unit 3 – Advanced Fresh & Permanent Floral Design Techniques	- Plan and construct contemporary fresh and permanent botanical designs - Apply layering, terracing, pavé, clustering, and pillowing - Apply grouping, banding, binding, shadowing, sequencing, framing, zoning, and parallelism - Evaluate craftsmanship, mechanics, balance, and design intent	- AFD5(A–C) - AFD4(C–F)	- Timed advanced design challenge - Portfolio photography and reflection - Peer juried design critique
2	10–12	Unit 4 – Occasion-Specific Design: Weddings & Funerals	- Planning process for occasion-specific floral work - Wedding/funeral terminology and design applications - Bouquets, boutonnieres, corsages, sprays, and pedestal arrangements - Current trends, tool use/maintenance, original occasion-specific designs	- AFD6(A–D) - AFD7(A–E)	- Mock wedding or sympathy design package - Client-style consultation role play - Trend board
2	13–15	Unit 5 – Event Consultation, Proposal & Production Management	- Conduct consultation: occasion, budget, formality, theme - Select designs aligned to objectives and budget - Develop proposal, production schedule, and procurement plan - Implement event design through installation/disassembly and evaluate results - Analyze contingencies for large-volume work	- AFD8(A–F) - AFD6(C–D)	- Full event-design capstone - Vendor sourcing exercise - Production workflow simulation
2	16–17	Unit 6 – Floral Business, Merchandising & Professional Organizations	- Calculate markups and analyze profitability/pricing - Develop budgets and negotiate floral-service contracts - Customer service and vendor relationships - Marketing, displays, and advertising - Professional organizations and industry-based certification benefits	- AFD9(A–G) - AFD10(A–B) - AFD1(A–B)	- ACCESS: entrepreneurship/employability tools - Simulated floral business pitch - Certification research
2	18	Semester 1 Exam – Advanced Floral Design	- Cumulative written and performance assessment - Advanced design production and critique - Event planning/business application - SAE/portfolio checkpoint	Cumulative: AFD1–10	Targeted review, remediation, and enrichment
3	19–20	Unit 7 – Plant & Soil Science Careers, Scientific Practices, SAE & Leadership	- Plant-science career/entrepreneurship plan; professionalism, safety, ethics, citizenship - Launch scientific notebook and SAE records - Scientific questions, problems, hypotheses/theories/laws, models, tools, SI/qualitative data - Leadership participation and STEM resource/career exploration	- APSS1(A–E) - APSS2(A–H) - APSS5(C) - APSS6(A–B) - APSS7(A–C)	- ACCESS: STEM/career research - Lab/field safety practicum - FFA/CTSO and SAE integration

3	21–22	Unit 8 – Scientific Investigation, Data Analysis & Communication	• Design descriptive, comparative, and experimental investigations • Collect/graph data; analyze statistics, patterns, error, and limitations • Use mathematics and evaluate experimental/engineering designs • Develop evidence-based explanations; communicate and defend conclusions • Evaluate research, innovation, methodology, cost-benefit, and scientist contributions	• APSS2(A–H) • APSS3(A–D) • APSS4(A–C) • APSS5(A–B)	• Student-designed investigation • Scientific poster/presentation • Research critique
3	23–24	Unit 9 – Plants, Soil & Civilization; Plant Cells and Anatomy	• Historical milestones in plant/soil science and effects on civilizations/economies • Plant selection/domestication and soil influence on settlement/migration • Plant-cell organelles, growth/division, specialization, levels of organization • Plant structures/functions, monocot/dicot anatomy, propagation, modified structures	• APSS8(A–D) • APSS9(A–D) • APSS10(A–D)	• Microscopy/cell lab • Plant anatomy dissection • Domestication/history case study
3	25–27	Unit 10 – Plant Physiology, Nutrition & Soil Properties	• Photosynthesis and cellular respiration investigation • Mineral nutrition; essential macro/micronutrients • Soil formation, texture, horizons, structure, color, parent material, fertility, soil orders • Conservation, soil mechanics, sustainable management, land judging, soil health testing, soil ecology	• APSS11(A–D) • APSS12(A–I)	• Soil profile/texture lab • Soil testing field investigation • Plant nutrition/fertilizer trial
4	28–29	Unit 11 – Weathering, Soil Formation & Ecosystem Ecology	• Chemical/mechanical weathering and geological formations • Biotic factors in soil formation • Populations, communities, ecosystems, biomes • Native vs. introduced plants; abiotic cycles and ecosystem effects • Evaluate human impacts including pest control, hydroponics, monoculture, sustainable agriculture	• APSS13(A–D) • APSS14(A–F)	• Weathering model investigation • Local ecosystem field survey • Native/introduced plant data study
4	30–31	Unit 12 – Crop Science, Genetics, Pests & Emerging Technology	• Crop genetics/evolution and plant taxonomy • Seed quality; pest/disease identification using lab equipment • Germination, spacing, and fertilizer trials • Analyze crop trends locally, in Texas, and the U.S. • Biotechnology, AI, drones, infrared, and sensor technologies	• APSS15(A–G)	• Germination/spacing/fertilizer experiment • Microscope pest/disease lab • Precision-ag technology research
4	32–33	Unit 13 – Environmental Resources, Watersheds & Sustainability	• Land use/management and water sources, quality, conservation • Rainwater collection, efficient irrigation, biofuels • Economic/environmental interdependence and human/technology impacts • Natural disasters and regional-to-global environmental effects • Local watershed characteristics; floods, drought, irrigation, urbanization, industrialization	• APSS16(A–G) • APSS17(A–B)	• Local watershed investigation • Irrigation/water-conservation design • Structured evidence-based debate
4	34–35	Unit 14 – Plant–Soil Relationships, Hydroponics & Crop Production	• Plant-soil interrelationships in agricultural and urban settings • Hydroponic techniques; advantages/disadvantages • Growth/development of major Texas crops • Plant breeding, development of new varieties, and genetics investigation • Test alternative production methods such as hydroponics/aquaponics • Finalize SAE/scientific portfolio	• APSS18(A–D) • APSS19(A–E) • APSS6(A–B)	• Hydroponics/aquaponics investigation • Crop genetics inquiry • Final science portfolio
4	36	Semester 2 Exam – Advanced Plant and Soil Science	• Cumulative written and laboratory/performance assessment • Data analysis, plant/soil systems, ecology, crop science, and resource management • Final SAE/scientific portfolio checkpoint	• Cumulative: APSS1–19	• Targeted review, remediation, and enrichment

TEKS Coverage Checklist

Semester 1 – Advanced Floral Design

Strand	Student Expectations	YAG Placement	Coverage
AFD1	AFD1(A–E)	Units 1, 6	100% – all listed expectations
AFD2	AFD2(A–B)	Unit 1	100% – all listed expectations
AFD3	AFD3(A–C)	Unit 1	100% – all listed expectations
AFD4	AFD4(A–F)	Units 2–3	100% – all listed expectations
AFD5	AFD5(A–C)	Unit 3	100% – all listed expectations
AFD6	AFD6(A–D)	Units 4–5	100% – all listed expectations
AFD7	AFD7(A–E)	Unit 4	100% – all listed expectations
AFD8	AFD8(A–F)	Unit 5	100% – all listed expectations
AFD9	AFD9(A–G)	Unit 6	100% – all listed expectations
AFD10	AFD10(A–B)	Unit 6	100% – all listed expectations

Semester 2 – Advanced Plant and Soil Science

Strand	Student Expectations	YAG Placement	Coverage
APSS1	APSS1(A–E)	Unit 7	100% – all listed expectations
APSS2	APSS2(A–H)	Units 7–8; embedded thereafter	100% – all listed expectations
APSS3	APSS3(A–D)	Unit 8; embedded thereafter	100% – all listed expectations
APSS4	APSS4(A–C)	Unit 8; embedded thereafter	100% – all listed expectations
APSS5	APSS5(A–C)	Units 7–8; embedded thereafter	100% – all listed expectations
APSS6	APSS6(A–B)	Units 7, 14	100% – all listed expectations
APSS7	APSS7(A–C)	Unit 7	100% – all listed expectations
APSS8	APSS8(A–D)	Unit 9	100% – all listed expectations
APSS9	APSS9(A–D)	Unit 9	100% – all listed expectations
APSS10	APSS10(A–D)	Unit 9	100% – all listed expectations
APSS11	APSS11(A–D)	Unit 10	100% – all listed expectations
APSS12	APSS12(A–I)	Unit 10	100% – all listed expectations
APSS13	APSS13(A–D)	Unit 11	100% – all listed expectations
APSS14	APSS14(A–F)	Unit 11	100% – all listed expectations
APSS15	APSS15(A–G)	Unit 12	100% – all listed expectations
APSS16	APSS16(A–G)	Unit 13	100% – all listed expectations
APSS17	APSS17(A–B)	Unit 13	100% – all listed expectations
APSS18	APSS18(A–D)	Unit 14	100% – all listed expectations
APSS19	APSS19(A–E)	Unit 14	100% – all listed expectations

Course Implementation Notes

- Advanced Floral Design prerequisite: Floral Design. The semester sequence moves from advanced design theory and technique into occasion-specific planning, event execution, business management, and professional certification awareness.
- Advanced Plant and Soil Science is a science-credit course with specified prerequisites and requires at least 40% of instructional time in laboratory and field investigations. The YAG therefore embeds scientific and engineering practices throughout Semester 2.
- ACCESS is included as an optional extension/support resource where it fits career, employability, portfolio, and research work.