

# SCIN316

**STUDENT WARNING:** This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

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## Course Summary

### Description

**Course Description:** An introduction to classification and evolution of vascular plants, with emphasis on flowering plants (angiosperms). This course will use structural terminology, characteristics of major plant families, and systematics. Student will use taxonomic keys, floras, and manuals for species identification. Prerequisite: SCIN130 or BIOL134

#### Course Scope:

An introduction to classification and evolution of vascular plants, with emphasis on flowering plants (angiosperms). This course will use structural terminology, characteristics of major plant families, and systematics. Student will use taxonomic keys, floras, and manuals for species identification. For students to be successful, Introduction to Botany is strongly recommended as a prerequisite to this course.

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### Objectives

After successfully completing this course, you will be able to:

- (LO-1) Construct dichotomous keys
- (LO-2) Describe the morphological characteristics of the major plant families.
- (LO-3) Evaluate traditional (morphology based) and contemporary (molecular and genetics based) methods of classification.
- (LO-4) Explain how and why evolution influences patterns of biodiversity and relatedness in plants.
- (LO-5) Use electronic sources for plant identification.
- (LO-6) Apply knowledge of plant families to identify unknown plants.

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### Outline

**Week 1: Phylogenetics, Nomenclature and Taxonomy Introduction, Vegetative characteristics**

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Learning Objectives

LO-1

LO-2

LO-4

Readings

Syllabus

Elpel pp. 1-4

Harris & Harris pp. 139-148

Week 1 Lessons (Lecture Notes, Videos, Links, etc.)

Joppa 2010 Article "How many flowering plants are there?"

Assignment(s)

**Forum 1**

**Assignment 1- vegetative characteristics lab (assigned)**

**Review syllabus**

**Week 2: Phylogenetics, Angiosperm morphology, Vegetative characteristics cont.**

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Learning Objectives

LO-2

LO-3

LO-4

Readings

Elpel 5-18

Harris & Harris pp. 149-164

Gregory 2008 Article "Understanding Evolutionary Trees"

Week 2 Lessons (Lecture Notes, Videos, Links, etc.)

Assignment(s)

**Forum 2**

**Quiz 1 (Systematics, Nomenclature, Phylogenetics, Vegetative characteristics)**

**Assignment 1 due**

**Week 3: Evolution & Biosystematics, Flower characteristics, Practical Tips for Plant ID (habitat, location, find an expert)**

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Learning Objectives

LO-2

LO-3

LO-6

## Readings

Elpel pp. 19-23

Harris & Harris pp. 172-180

Week 3 Lessons (Lecture Notes, Videos, Links, etc.)

Donahue 2008 Article "A Phylogenetic perspective on plant diversity."

Assignment(s)

## **Forum 3**

**Assignment 2- flower dissection lab assigned**

**Week 4: Biodiversity & Plant Families, Orders: Water Lily, Pepper, Magnolia, Laurel & Hornwort, Flower characteristics cont.**

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## Learning Objectives

LO-2

LO-4

LO-6

## Readings

Elpel: 50-54

Harris & Harris 181-200

Week 4 Lessons (Lecture Notes, Videos, Links, etc.)

Biodiversity "Chapter 3- The mechanisms at work in the diversification of life"

Assignment(s)

## **Forum 4**

**Assignment 2 due**

**Week 5: Plant Families-Clade: Monocots, Fruit & seed characteristics**

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## Learning Objectives

LO-2

LO-6

## Readings

Elpel pp. 182-209

Harris & Harris pp. 200--206

Week 5 Lessons (Lecture Notes, Videos, Links, etc.)

Assignment(s)

## **Forum 5**

## Quiz 2

### Week 6: Plant Families Orders: Buttercup & Rosid, Fruit & seed characteristics cont.

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Learning Objectives

LO-2

LO-6

Readings

Elpel pp. 55-111

Week 6 Lessons (Lecture Notes, Videos, Links, etc.)

Assignment(s)

### Forum 6

### Week 7: Plant Families-Clade:Asterids

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Learning Objectives

LO-2

LO-6

Readings

Elpel pp. 124-181

Week 7 Lessons (Lecture Notes, Videos, Links, etc.)

Assignment(s)

### Forum 7

### Local plant collection due

### Week 8: Plant Families-Orders: Sandalwood & Pink, Course Wrap-Up & Synthesis

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Learning Objectives

LO-2

LO-6

Readings

Elpel pp. 112-123

Week 8 Lessons (Lecture Notes, Videos, Links, etc.)

Assignment(s)

### Forum 8

## Final Exam- plant identification

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### Evaluation

Please see the [Student Handbook](#) to reference the University's [grading scale](#)

#### Grading:

Name	Grade %
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### Materials

**Book Title:** Plant Identification Terminology: An Illustrated Glossary

**Author:** Harris, James G. / Harris, Melinda Woolf

**Publication Info:** Spring Lake Publishing

**ISBN:** 9780964022164

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**Book Title:** Botany in a Day, 6th Ed

**Author:** Elpel, T

**Publication Info:** Hops Press

**ISBN:** 9781892784353

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**Book Title:** You must validate your cart to get access to your hard copy book(s). If needed, instructions are available here - <http://apus.libguides.com/bookstore/undergraduate>

**Author:** N/A

**Publication Info:** N/A

**ISBN:** N/A

#### Required Technology

- See the Technology Requirements section of the undergraduate catalog for the minimum hardware and software requirements.
- Microsoft Office 365 is available to APUS students for free. To sign up, visit <http://products.office.com/en-us/student>. If you have questions about accessing the software, please contact Classroom support at [classroomsupport@apus.edu](mailto:classroomsupport@apus.edu).

#### Additional Resources

Other references for this course can be found in the Resources section of our classroom. Additionally, these books might be useful:

Glimn-Lacy, J. and P.B. Kaufman. (2006). Botany Illustrated: Introduction to Plants, Major Groups, Flowering Plant Families, 2nd Edition. Springer Science: New York, NY USA. 146pp.

Murrell, Z.E. (2010). Vascular Plant Taxonomy, 6th Edition. Kendall Hunt Publishing: Dubuque, IA USA. 656pp.

## Websites

In addition to the required course texts the following public domain Websites are useful. Please abide by the university's academic honesty policy when using Internet sources as well. Note web site addresses are subject to change.

Site Name	Website URL/Address
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APA Citation

Guide –  
AMU/APU  
Library

[http://www.apus.edu/Online-Library/tutorials/apa\\_citing.htm](http://www.apus.edu/Online-Library/tutorials/apa_citing.htm)

Encyclopedia  
of Life

<http://www.eol.org/>

Plant

Families:

Online

Botany Guide

<http://www.thewildclassroom.com/biodiversity/floweringplants/Intro.htm>

Guide to

Flowering

Plant

Families

[http://www.wildflowers-and-weeds.com/Plant\\_Families/Patterns\\_in\\_Plants.htm](http://www.wildflowers-and-weeds.com/Plant_Families/Patterns_in_Plants.htm)

NatureServe  
Explorer

<http://www.natureserve.org/explorer/>

USDA Plants  
Database

<http://plants.usda.gov/java/>

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## Course Guidelines

### Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

### Tutoring

- [Tutor.com](http://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours\* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

### Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

## Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

## Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

## Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

## Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

## Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- “Substantive” means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

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## University Policies

### [Student Handbook](#)

- [Drop/Withdrawal policy](#)

- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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