

Building D 3rd Floor FTTE UNS Jl Ir. Sutami No. 36 A Kentingan Surakarta 57126 Indonesia E-mail: biologi@fkip.uns.ac.id; Website: https://biologi.fkip.uns.ac.id/en/

Diversity and Classification of Cryptogamae Undergraduate Programme In Biology Education

Module Handbook

Module Name	Diversity and Classification of Cryptogamae							
	(Keanekaragaman dan Klasifikasi Cryptogamae)							
Module level	<u> </u>	Undergraduate Programme						
Course Code		02013243002						
Abbreviation, if applicable	DCC	DCC						
Courses included in	-							
the								
module, if applicable								
Semester/Term	2 nd							
Module coordinator (s)	Dr. Hai	dita, N	M. Si.					
Lecturer (s)	Dr. Mu	zzaziı	nah, M.Si					
	Nurmiy	yati, S	.Pd, M.Si					
Language	Bahasa	Indo	nesia (Indones	ian Language)				
Classification within	Compu	lsory/	Elective					
the								
curriculum								
Teaching format/class	Direct in	nstru	ction/face to f	ace/blended lear	rning:			
hours per week during	26.7h/w	26.7h/week : lecture, discussion, laboratorium activity, field						
the	study	study						
semester	Structu	red a	ctivity: 32h/we	eek (Through the	analysis of			
	journal a	article	s, students lear	rn to analyze the	embryonic			
	develop	ment (of cryptogama	e plants, diversity	y, and			
	classific	ation	of phylum in (Cryptogamae)				
	Self-stu	dy ac	tivity: 32h/we	ek (Students lear	n various			
	characte	ristics	s of cryptogam	ae from various	sources)			
	1		laboratory:					
	Laborate	ory ac	tivity = 10 top	ic/week x 170 m	inutes = 1700			
	minutes							
	Hour = 1	1700 ı	minutes/60 min	nutes = 28.3h				
Workload								
	Type	CS	Face to	Structured	Self-study			
		U	Face	Activities				
	T	2	26.7h (1.00	32h (1.21	32h (1.21			
			ECTS)	ECTS)	ECTS)			
I .	1	P 1 28.3h (1.07 ECTS)						



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	Total 3 119h (4.5 ECTS)							
Credit Point	3 CSU (4.5 ECTS)							
Requirements	Has taken courses in General Biology							
Learning goals/competencies	PLO 2 They are able to apply the basic advance knowledge in biology to solve the problem in biology. PLO 6 They are able to select and analyze the proper technology and information or data in accomplishing tasks.							
	CLO 1 Applying the concepts and principles of diversity, identification, description and classification of cryptogamae plants in each taxon selected from Algae, Jamur, Lichen, Briophyta and Pteridophyta through practicum. (LO 2, LO 6) CLO 2 Applying the classification of taxon members Algae, Jamur, Lichen, Briophyta and Pteridophyta based on the equations and differences in morphological characteristics observed. (LO 2, LO 6) CLO 3 Designing cryptogamae diversity based-activities project. (LO 2, LO 6) CLO 4 Communicating the results of project-based diversity of Cryptogamae in oral (video), and writing (poster/report). (LO 2, LO 6)							
	PLO And CLO Mapping							
	CLO PLO PLO P PL PLO PLO							
	CLO * *							
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Content	This course studies the origin of low-level plant life (Cryptogamae) which includes characterization, classification, naming, diversity, kinship and economic value of lower-level plants. In this course, the characters of lower plants (Cryptogamae) are studied; the taxonomic position of lower plants (Cryptogamae) among other organisms; the basics of the classification of lower plants (Cryptogamae); classification of lower plants (Cryptogamae); kinship and evolution of lower plants (Cryptogamae) with other plant groups; character and classification of members of Algae, Lichenes, Fungi, Bryophyta and Pteridophyta; economic potential and benefits of low-level plants (Cryptogamae).				
	Cryptogamae diversity and classification practicum examines: 1. Schizophyta 2. Thallophyta 3. Phaeophyta 4. Rhodophyceae 5. Fungi 6. Lichenes 7. Bryophyta 8. Pteridophyta				
Attribute Soft skill	 Able to think conceptually, analytically, and logically Have good communication skills 				
Study/exam achievements	Students are considered to complete the course and pass if they obtain at least 60% of maximum final grade. The final grade (FS) is calculated based on the following ratio:				
	Aspect	(%)			
	Task/quiz/presentation / laboratory activity	30			
	Participation	10			
	Mid-Term Test (Team Based 30				
	11				
	Project) Final Exam	30			



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Form of Media	Powerpoint slide, learning video, specimen
Literature (primary references)	1. Simpson MG. (2010). Plant Systematics second edition. Academic Press. http://www.elsevierdirect.com/companions/978012374380 0 2. Muzayyinah. (2006). Diversity and Classification of Vascular Plants. Solo: UNS Press 3. Yang, L., Wang, Z., Zhou, L., Ma, Y., Wang, Z., Ying, T., & Xu, W. (2012). Response and bioindicator of bryophyte and lichen as cryptogamae plants to environmental change. Journal of Nanjing Forestry University (Natural Sciences Edition), 36(3), 137-143. 4. SETYAWAN, A. D., SUTARNO, S., & SUGIYARTO, S. (2013). Species diversity of Selaginella in Mount Lawu, Java, Indonesia. Biodiversitas Journal of Biological Diversity, 14(1). 5. MUNAWAROH, E., & YUZAMMI, Y. (2019). Species diversity of Orchids in Bukit Barisan Selatan National Park, Lampung, Indonesia. Biodiversitas Journal of Biological Diversity, 20(1), 343-349. 6. Alamsyah, M. R. N., & Pamungkas, S. J. (2021). The Diversity of Pteridophyta at Mountain Telomoyo as Biology Learning Resources. Indonesian Journal of Biology Education, 3(2), 18-27. 7. Puspitasari, R., Suedy, S. W. A., & Haryanti, S. (2018). Plant diversity based on pollen and spores morphology from sediment lake of Kedung Ombo Purwodadi. NICHE Journal of Tropical Biology, 1(2), 35-41.

Assessment Presentation Assessment Rubric

Dimension	Weight (%)	Score	WxS	Comments
Material mastery	30			
The accuracy of solving the problem	30			
Communication skills	20			
Ability to deal with questions	10			



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Props/presentations	10		
Final Score	100%		

	Scale						
Dimension	Very Good Good		Sufficient	Deficient	Very Deficient		
	≥85	71-84	60-70	40-59	<40		
Organisation	Well organized by presenting facts that are supported by examples that have been analyzed according to the concept	well organized and present convincing facts to support conclusions.	The presentation has focus and presents some evidence to support the conclusion	Sufficiently focused, but insufficient evidence to be used in drawing conclusions	There is no clear organization. Facts are not used to support statements.		
Content	Content can inspire listeners to develop their minds.	Contents are accurate and complete. Listeners get new insights about the topic.	Content is generally accurate, but incomplete. Listeners can learn some implied facts, but they don't add new insight into the topic	The content is less accurate, because there is no factual data, it does not add to the listener's understanding	The content is inaccurate or too general. Listeners don't learn anything or are sometimes misled.		
Presentation Style	Speak with passion, transmit enthusiasm and enthusiasm to listeners	The speaker is calm and uses proper intonation, speaks without relying on notes, and interacts intensively with the listener. The speaker always makes eye contact with the listener.	In general the speaker is calm, but with a flat tone and quite often relies on notes. Sometimes eye contact with the listener is ignored.	Based on the notes, no ideas are developed outside the notes, the sound is monotonous	The speaker is anxious and uncomfortable, and reads notes rather than speaking. Listeners are often ignored. There is no eye contact because the speaker is looking more at the whiteboard or screen.		

TASK 1 (Short Communication)

- 1 Species of any of the observable species in the Cryptogamae.
- Wet/dry collection for observation.
- Characterization through observation: Morphology, Anatomy, Histology, Molecular, Benefits, Ecology
- Review of Journals and Textbooks
- Photo
- Scientific writing

Format of Articles in Reputable Scientific Journals:

- (1) Title,
- (2) Identity or Authorship,
- (3) Abstract and keywords (Key words),
- (4) Introduction and Literature Study,
- (5) Research Methods/Methods,
- (6) Results and Discussion,
- (7) Conclusions and Suggestions,



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- (8) Acknowledgement), and
- (9) Bibliography.

Noted:

Consulted, Collected 1 week before the presentation schedule. Published in FB, Twitter, IG, study program website, or magazines.

Rubric for Review Article

	Assessment Aspect		ele 1	Article 2		Article 3	
No	Score	High 6-10	Low 1-5	High 6-10	Low 1-5	High 6-10	Lo w 1-5
1.	Articles come from the indexed journals in the last 3 years.						
2.	Articles related to the theme of learning chemistry						
3.	The number of articles at least discusses learning chemistry						
4.	Accuracy in summarizing the important parts of the abstract of the article						
5.	Accuracy of summarizing important thought concepts in the article						
6.	Accuracy of summarizing the methodology used in the article						
7.	The accuracy of summarizing the research results in the article						
8.	The accuracy of summarizing the discussion of research results in the article						
9.	The accuracy of summarizing the conclusions of the research results in the article						
10.	The accuracy of commenting on selected journal articles						
	Total score for each article summary						
	Average score obtained						