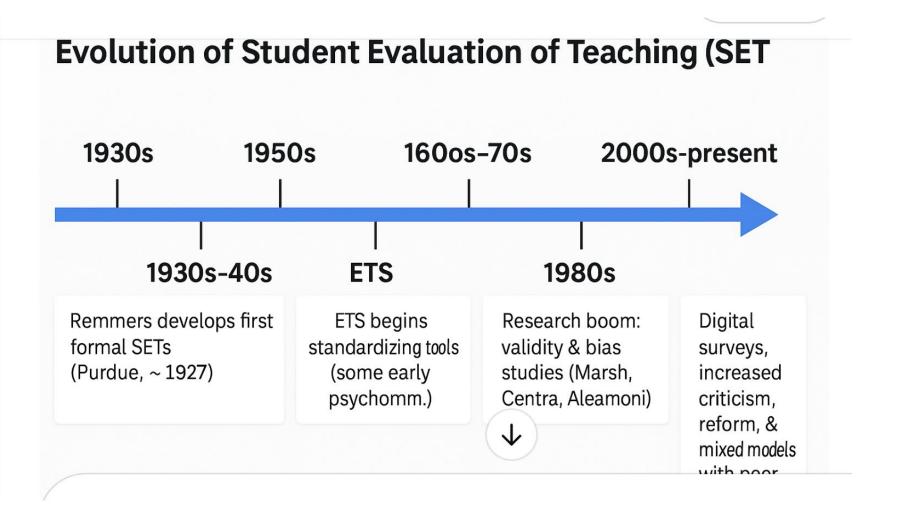


## **Evaluation of Effective Teaching**

Larry Abele
June 2025

## **Student Evaluation of Teaching Timeline**



### Purdue Student Rating of Instruction (circa 1927-1930) Herman H. Remmers, Purdue University

Item	Excellent (5)	Good (4)	Average (3)	Fair (2)	Poor (1)
1. Clarity of explanations	•	•	•		
2. Organization of the material	•	•	•	•	
3. Knowledge of the subject	•	•	•	•	•
4. Ability to stimulate interest	•	-	•	•	
5. Fairness in grading	•	-	•	•	
6. Availability outside of class	•	-	•		
7. Interest in individual students	•	-	•	•	
8. Encouragement of discussion	•	-	•		
9. Personal qualities (patience, o	courtes, respect)	-	•		
10. Overall teaching effectivenes	ss	•	•		•

## Publications on Evaluation of College Teaching (The vast majority are negative)

- A Google Scholar search on Evaluation of College Teaching yielded:
  - 5,810,000 articles

## Typical Evaluation Questions in 2025

Section D SUSSAI	E	VG	G	F	P	(N)
Description of course objectives and assignments	43.8%	31.4	18.9	4.6%	1.2%	98066
Communication of ideas and information	45.4%	29.8	17.3	5.6%	2.0%	97958
3. Expression of expectations for performance in class	46.9%	29.4	17.6	4.8%	1.3%	97692
4. Availability to assist students in or out of class	49.3%	27.3	17.7	4.4%	1.2%	97372
5. Respect and concern for students	56.7%	25.5	13.5	3.2%	1.1%	97450
6. Stimulation of interest in the course	48.9%	26.9	16.1	5.7%	2.4%	97287
7. Facilitation of learning	47.4%	28.7	17.1	5.0%	1.8%	97204
8. Overall assessment of instructor	53.6%	25.3	14.1	5.1%	1.8%	97237

## Responses for a Course of Concern

(defined as scores in Fair and Poor that are 5X higher than averages)

Section D SUSSAI	E	VG	G	F	P	(N)
Description of course objectives and assignments	3%	3%	38%	29%	18%	43
Communication of ideas and information	3%	0	35%	41%	21%	43
3. Expression of expectations for performance in class	3%	0	24%	32%	32%	43
4. Availability to assist students in or out of class	0%	9%	38%	32%	26%	43
5. Respect and concern for students	3%	3%	24%	26%	41%	43
6. Stimulation of interest in the course	6%	24%	24%	44%	21%	43
7. Facilitation of learning	3%	6%	38%	26%	24%	43
8. Overall assessment of instructor	3%	3%	18%	35%	41%	43

## One of MILLONS of reports regarding faculty attitudes toward student evaluations

COLLEGE MATTERS FROM THE CHRONICLE

## Why Faculty Hate Teaching Evaluations

Jack Stripling

https://www.chronicle.com/podcast/college-matters-from-the-chronicle/why-faculty-hate-teaching-evaluations May, 2025

## Percentage of institutions that use various sources of information for evaluation of teaching

Information Source	% used in 2000 (n=506)	% used in 2020 (est. n~401)
Student Evaluation	88.1%	94.2%
Peer classroom visits	40.3%	60.4%
Course Syllabi & exams	38.6%	4.5%
Grade distribution	6.7%	10.1%
Student exam performance	5%	7.2%

### What do students want?

https://reports.collegepulse.com/students-perspective-on-academic-life

A collaboration between Inside Higher Ed and College Pulse

- Sample size of >450,000 from >1500 colleges, including two- and four-year schools. Sampling done in 2021-2023.
- Each student completed a questionnaire of the same 20 questions dealing with advising and teaching/learning, as well as free form options.

## **Student Survey Results**

https://reports.collegepulse.com/students-perspective-on-academic-life

## What Students Want

Professor actions students say would help them academically:



Being more flexible about deadlines: 57%

Being more flexible about attendance and/or participation: 44%

Offering some class sessions online during in-person courses: 26% Being more accessible outside of class hours: 22%

Being open to experimenting with different teaching styles: 51%

Taking more of an interest in getting to know students: 34%

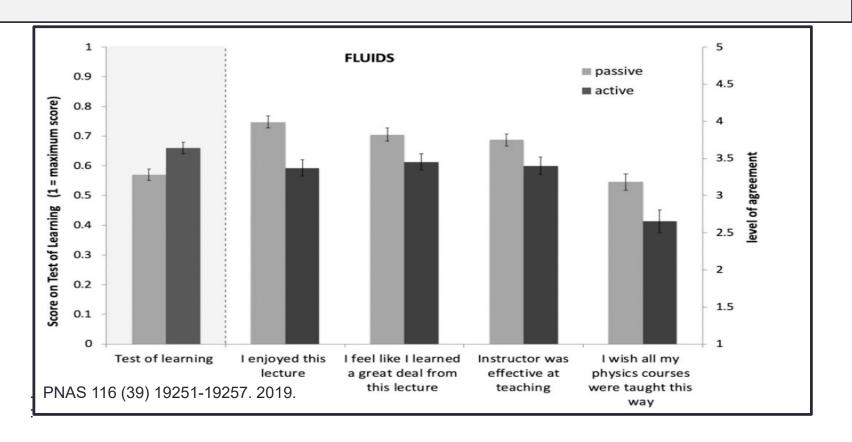
Setting expectations more clearly: 42%

Including wellness resources in syllabi or discussing resources in class: 18% Including academic support resources in syllabi: 17%

Setting higher expectations for me and my peers: 8%

None of the above: 6%

## While students preferred lectures, they learned more in interactive classes



### Holistic Observational Instruments

- Reformed Teaching Observation Protocol (RTOP)
- UTeach Observation Protocol (UTOP)
- Teaching Behaviors Inventory (TBI)
- Teaching Dimensions Observation
   Protocol (TDOP)
- And several others

## A Typical Observation Scoring Sheet with Codes (observer records a code every two minutes)

Dat 1. L	List	eni	ng; I	nd-l	Indiv	ridu	al th	ess: ninki	ing;	CG-	lr	ker (	Q di	scus	sion	; W	3-W	orks	ට ී hee	t gr	E£ oup	wo	لمر Ne_Ne rk; C	o. st	ude Othe	nts r gro	/©	wor	Arranged how? LECTORE 10,2. k; AnQ-Answer Q; SQ-Student Q; WC-Whole class discuss;
2. L	ec-L	ect	urin	g; Rt	w-	Writ	ing;	FU	p-Fo	llow	r-up	; PC	)-Po	se Q	; ca	-Clic	ker	Q; A	lnQ	-An	swe	r Q:	MG	-Mo	pvinj	g/Gu	ridin	g; 1	o1-One-on-one; D/V-Demo+; Adm-Admin; W-Waiting; O-Other
	eact IS-Si			ne i	nter	ναί,	che	ck c	olur	nns	tos	how	n any	at's	hap	pen	ng i	n eo	ich d	ote	gory	(or	dra	wv	ertic	of li	ne t	o inc	dicate continuation of activity). OK to check multiple columns.
	_	_	ts doi	ne		_	_	_	_	3	_			2.15	struct	tordo	inz			_		-	_	_		3.6		ment	Comments: EG: explain difficult coding choices. flag key points for feedback for the
					06	Anc	SQ	WC	Pnd	SP	TQ	W	0					ÇQ	An0	MG	101	DyN	Adn	w	0	L			instructor, identify good analogies, etc.
0-2	1									Г	Г	V	Г	7	Г	Г		Г	Г		Г	Г	V	1	1	V			WORKING. SMIT FYILL TO
2	/	Г		Г	Г	Г			Г	Г	Г	Ī	1		Г	Г	Г			Г	T		Г	V	1	T	T	ⅳ	- ICHICKER NOT WOLLING
4	V	_		Г	Г	$\vdash$	$\vdash$	T	┢	T	T	✝	$^{\dagger}$		Н	-				$\vdash$	H	T	$^{+}$	+	t	H	1-	ヤ	- STILL HOLE MUSCOED TO
6	1	-	Г	-	Н	$\vdash$	-		$^{\dagger}$	t	t	t	t	1	H			Н	$\vdash$	-	Н	$\vdash$	t	t	H		+-	V	- SOME TAZKING AT BACK.
8-	V	-	Н	$\vdash$	+	-	Н	H	╆	-	t	H	t	/	H	-		-	┢	$\vdash$	$\vdash$	$\vdash$	+	┢	╆	Н	H	b	ONE CHATPING - CAR TOLYING.
-	L	Ind	cs	WG	og	Ang	50	wc	Prd	SP	TO	w	1.	Lec	REW	FUe	PO	co	Ano	MS	lal	DA	Adn	l w	0	١.	M	H	WALK TO BACK.
19 - 12	$\overline{}$							-		1		T	Ť	/		-	-			-	1			Ï	ľ	Ť	i		SOME WHOMING.
12	V		Г	Г			Г	1	Г	Г	T	T	✝	1	-	T				┪			t	Г	T	1	✝	t	
14	V	Г	Т	Т		Н	-	Н	+	$\vdash$	$\vdash$	✝	t	V	Н		П		Н		H	-	┢	✝	H		H	ř	
16	V	_	-		-	Н	$\vdash$		$\vdash$	┢	H	╁	t	1	Н	-			-		$\vdash$	Н	-	╁	$\vdash$	┝	Н	1	
18-	v	_	⊢	H	$\vdash$	-	⊢	-	┝	⊢	⊢	╁	╁	1	-	H	Н	-	-		$\vdash$	-	1	$\vdash$	H	-	-	10	
20	Ĺ	14	-	unio.	-	4.0	-		ļ.,	ļ.,	ļ.,	١	١.	1				_	_	<u></u>	ļ.,		ļ.,	ļ.,	Ļ	ļ.,	1 -	1	SOME TACKING OF BUCK LOOPER
20-	Ù	ano.	100	WU	06	****	NQ	W.C	PHO	35	114	W	۳	-/	KIW	гор	PQ	щ	AnQ	MG	101	D/V	Adt	W	0	Ļ	M		
22	. /	H	$\vdash$		-	H		$\vdash$	⊢	-	⊢	⊢	╁	ľ	-	$\vdash$		Н	-	Н	-	-	$\vdash$	⊢	⊢	-	Ľ	1	- LOUGH MADE THOM DEMANDED
-	Ľ	_	-	H	_	-	L	-	-	L	L	⊢	╀	ľ	_	L	_	Н		L	-	_	┡	L	_	┡	Ľ	Ľ	WHAT THE COUSED SKTIPCTION
24		L	-		_			L	L	L	L	_	╄	1	_			Ц		L	<u>_</u>	L	L	ļ	L	L	Ľ	Ľ	PARDICT
26	1	_									_	L		~														/	PERSON STOR OF PARTY.
28 - 30	1		L											/															ANON GUE OR COOL VE
															-										-				1 Paran

## Factors important to students

#### **Subject Matter**

- Demonstrates detailed knowledge of the subject matter.
- Shows enthusiasm for the subject.

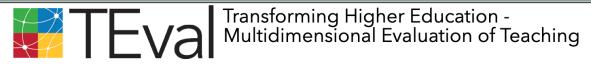
#### Presentation/Facilitation

- Is well-prepared for class (clear syllabus and schedule, organized in class).
- Stimulates interest in the subject.
- Encourages discussion/class interaction.
- Explains information clearly.
- Clear expectations for test and grading practices

#### **Approach to Students**

- Shows concern for students.
- Is readily available to students.
- Allows recovery from a single poor performance.

## Consortium developed a framework for a different approach to evaluating teaching







Materials 🔽



Contact

TEval is an NSF funded push to transform higher education.

We're advancing understandings of institutional change processes by studying and supporting the adoption and integration of new approaches to evaluating teaching.

Three institutions (UMass, KU, and CU) are incubating specific strategies and processes for effecting change.

Cross-case comparisons (from MSU) examine how these strategies and processes interact with different institutional cultures.

Transforming College Teaching Evaluation



A Framework for Advancing Instructional Excellence

Ann E. Austin, Noah D. Finkelstein, Andrea Follmer Greenhoot, Doug Ward, Gabriela Cornejo Weaver

reword by Lynn Pasquerell

Check out our forthcoming book from Harvard Education Press (Fall 2025): <u>Transforming College</u>
<u>Teaching Evaluation: A Framework for Advancing Instructional Excellence</u>

https://teval.net/

### The TEval approach to evaluation

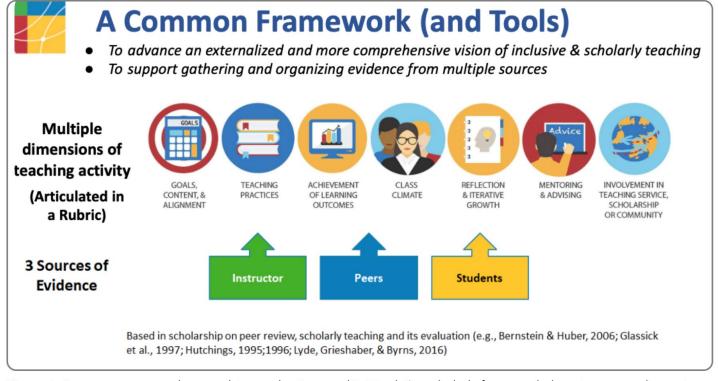


Figure 4: A common approach to teaching evaluation used in TEval: i) a scholarly framework denoting seven dimensions of quality teaching to be evaluated, and ii) three sources of evidence to provide data for evaluating teaching practice. Each campus has a support unit facilitating work across three layers of the institution: departmental, campus-wide stakeholders, and administration.

https://teval.net/?about

### Sources of Evidence of Teaching Effectiveness

Instrument
 Source of information

Student Ratings Students\*

Self-Evaluation
 Peers

Video Instructors/Peers

• Student Interviews Students\*

Alumni Ratings
 Alumni

Employer Ratings Employers

Administrative Ratings
 Administrators

Teaching Scholarship Instructors

Teaching Awards
 Instructors

Learning Outcomes
 Students

Teaching Portfolio Instructors/Peers/Student

• Grades in follow-on courses Students

Berk, R.A. 2005.International Journal of teaching and learning in higher education. 17(1):48-62. \*See "New to college teaching" Chronicle starter kit, 2018

## **Teaching Evaluation Checklist**

Evidence for evaluating teaching comes from instructors (columns 2-6), peers or observers (columns 7-10) and students (columns 11-12)......

Teaching Dimension	C.V.¤	Syllabi	Sample course materials	Representation of student work		Interview with instructor	Class observation	Review of student¶ materials¤	other observation tool	Student surveys and comments	Letters from students	¤
Goals, content, and alignment What are students expected to learn from the courses taught? Are course goals appropriately challenging? Is content aligned with the curriculum?	¤	Χ¤	Χ¤	п	X¤	X¤	Χ¤	<b>X</b> ¤	<b>a</b>	Χ¤	X¤	¤
Teaching practices How is in-class and out-of-class time used? What assignments, assessments, and learning activities are implemented to help students learn?	¤	Χ¤	Χ¤	ia	Χ¤	Χ¤	Χ¤	XII	<b>X</b> :	Χ¤	X¤	¤
Achievement of learning outcomes  What impact do these courses have on learners? What evidence shows the level of student understanding?	¤	¤	¤	X¤	Χ¤	Χ¤	а	X□	Д	a	Q.	¤
Class climate and student perceptions What are the students' views of their learning experience? How has student feedback informed the faculty member's teaching?	¤	Χ¤	¤	C C	Χ¤	¤	Χ¤	п	¤	Χ¤	Χ¤	¤
Reflection and iterative growth How has the faculty member's teaching changed over time? How has this been informed by evidence of student learning?	¤	Χ¤	Χ¤	X□	Χ¤	Χ¤	¤	¤	Ω.	¤	a	¤
Mentoring & advising How effectively has the faculty member worked individually with UG or graduate students?	(Student awards, achievements)	¤	¤	¤	Χ¤	Χ¤	Ω	X¤	CI.	¤	X¤	¤
Involvement in teaching service, scholarship, or community In what ways has the instructor contributed to the broader teaching community, both on and off campus?	X (participation in teaching & learning committees)		a ·	ia T	X¤	X¤	¤		a	¤	п	¤

<sup>··</sup>For summative evaluation, evidence should come from two or more sources for each dimension. For more information, see the CTE website.

## Detailed criteria for teaching evaluation

(revised Oct 2020)	Developing	Proficient	Expert
Goals, content, and alignment What are students expected to learn? Are course goals appropriate? Is content aligned with the curriculum? Does content represent diverse perspectives?  Teaching practices How is in-class and out-of-class time used? What assignments, assessments, and	Course goals are not articulated, or are unclear, inappropriate or marginally related to curriculum     Content and materials are outdated or unsuitable for students in the course     Range of topics is too narrow or too broad     Content is not clearly aligned with curriculum or institutional expectations     Content does not reflect diverse perspectives     Courses are not sufficiently planned or organized     Practices are not well-executed and show little development over time     Students lack opportunities to practice critical skills	Course goals are articulated and appropriate for curriculum     Content is current and appropriate for topic, students, and curriculum     Course topics have appropriate range     Standard, intellectually sound materials     Course materials reflect diverse perspectives	□ Course goals are well-articulated, high quality, relevant to all students, and clearly connected to program or curricular goals     □ Content is challenging and innovative or related to current issues and developments in field     □ Topics are well-integrated and of appropriate range and depth     □ High-quality materials, well-aligned with course goals     □ Course materials reflect diverse perspectives and promote critical reflection on these diverse perspectives     □ Courses are well-planned and integrated, and reflect commitment to providing meaningful assignments and assessments     □ Uses inclusive and effective or innovative methods to support learning in all students
assignments, assessments, and learning activities are implemented to help students learn? Are students engaged in the learning process?	Students lack opportunities to practice critical skills embedded in course goals     Student engagement is generally low     Assessments and assignments are at inappropriate difficulty level or not well-aligned with course goals	□ Students have some opportunities to practice skills embedded in course goals     □ Students are consistently engaged     □ Assessments/assignments are appropriately challenging and tied to course goals     □ Class climate is inclusive and promotes	carning in all students   In- and out-of-class activities provide opportunities for practice and feedback on important skills and concepts   Students show high levels of engagement   Assessments and assignments are varied and allow students to demonstrate knowledge through multiple modalities   Class climate is respectful, open, and inclusive; promotes both
What sort of climate for learning does the instructor create? What are students' views of their learning experience and how has this informed teaching?	belonging among all students  Class climate discourages student motivation or self-efficacy Consistently negative student reports of teacher accessibility or interaction skills  Little attempt to address concerns voiced by students	respect  Class climate encourages student motivation  No consistently negative student ratings of teacher accessibility or interaction skills  Instructor articulates some lessons learned through student feedback	student-student and student-teacher dialogue.  Climate fosters motivation, self-efficacy, ownership of learning Instructor models inclusive language and behavior Student feedback on teacher accessibility and interaction is generally positive Instructor seeks and is responsive to student feedback
Achievement of learning outcomes What impact do courses have on learners? What is the evidence of student learning? Are there efforts to make achievement equitable?	□ Insufficient attention to student understanding;     quality of learning is not described or analyzed with     clear standards     □ Evidence of inadequate learning or inequities in     learning without clear attempts to improve     □ Quality of learning is insufficient to support success     in other contexts	□ Standards for evaluating the quality of student understanding are clear     □ Student learning meets dept. expectations     □ Some use of evidence of student learning to inform teaching     □ Quality of learning is not a barrier to success in other contexts	□ Standards for evaluating understanding are clear and connected to program, curriculum, or professional expectations     □ Consistently attends to student learning, uses it to inform teaching     □ Quality of learning supports success in other contexts (e.g., subsequent courses or relevant non-classroom venues)     □ Efforts to support learning in all students by examining possible inequities in performance across groups and making adjustments
Reflection and iterative growth How has the instructor's teaching changed over time? How has this been informed by student learning evidence?	□ Little or no indication of having reflected upon or learned from prior teaching, evidence of student learning, or peer or student feedback □ Little or no indication of efforts to develop as a teacher despite evidence of need	Continued competent teaching, possibly with minor reflection based on input from peers and/or students     Articulates some lessons learned or changes informed by prior teaching, student learning, or feedback	□ Regularly adjusts teaching based on reflection on student learning, within or across semesters     □ Examines student performance following adjustments     □ Reports improved student achievement of learning goals and/or improved equity in outcomes based on past course modifications
Mentoring & advising How effectively has the instructor worked individually with UG or grad students?	☐ No indication of effective advising or mentoring (but expected in department)	<ul> <li>Some evidence of effective advising and mentoring (define as appropriate for discipline)</li> </ul>	Evidence of exceptional quality and time commitment to advising and mentoring (define as appropriate for discipline)
Involvement in teaching service, scholarship, or community How has the instructor contributed to the broader teaching community, both on and off campus?	Little or no evidence of positive contributions to teaching and learning culture in department or institution     Little or no interaction with teaching community     Practices and results of teaching are not shared with others	□ Some positive contributions to teaching and learning culture in department or institution □ Some engagement with peers on teaching □ Has shared teaching practices or results with others (e.g., presentation, workshop, essay)	□ Consistently positive contributions to teaching and learning culture in department or institution (e.g., curriculum committees, program assessment, co-curricular activities)     □ Regular engagement with peers on teaching (e.g., teaching-related presentations or workshops, peer reviews of teaching)     □ Presentations or publications to share practices or results of teaching with multiple audiences     □ Scholarly publications or grant applications related to teaching

## Criteria for the highest ranking in teaching

Expert
☐ Course goals are well-articulated, high quality, relevant to all
students, and clearly connected to program or curricular goals
<ul> <li>Content is challenging and innovative or related to current issues and developments in field</li> </ul>
☐ Topics are well-integrated and of appropriate range and depth
☐ High-quality materials, well-aligned with course goals
<ul> <li>Course materials reflect diverse perspectives and promote critical reflection on these diverse perspectives</li> </ul>
☐ Courses are well-planned and integrated, and reflect commitment
to providing meaningful assignments and assessments
<ul> <li>Uses inclusive and effective or innovative methods to support</li> </ul>
learning in all students
<ul> <li>In- and out-of-class activities provide opportunities for practice and feedback on important skills and concepts</li> </ul>
☐ Students show high levels of engagement
<ul> <li>Assessments and assignments are varied and allow students to demonstrate knowledge through multiple modalities</li> </ul>
<ul> <li>Class climate is respectful, open, and inclusive; promotes both student-student and student-teacher dialogue.</li> </ul>
☐ Climate fosters motivation, self-efficacy, ownership of learning
☐ Instructor models inclusive language and behavior
☐ Student feedback on teacher accessibility and interaction is
generally positive
☐ Instructor seeks and is responsive to student feedback

## Consortium guidance on course syllabi

(Includes detailed guidance and checklist for syllabi)

Teaching + Learning Lab

SUBSCRIBE

**NEWSLETTER ARCHIVE** 

CONTACT

SEARCH

Q



**ABOUT** 

**EVENTS** 

PROGRAMS & SERVICES

TEACHING RESOURCES

**RESEARCH & EVALUATION** 

**BLOG** 



Home » Syllabus Checklist to Support Student Belonging & Achievement

A Syllabus Analysis Tool to Advance Evidence-Based Teaching Practices at MIT

https://tll.mit.edu/teaching-resources/course-design/syllabus-checklist-landing/

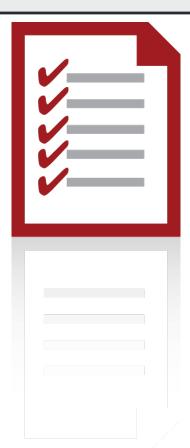
## The Course Syllabus

- It should be a valuable guide for you and your students.
- Does it contain a statement that places the course within the intellectual area of the field?
- Does it provide overall objectives for the course that are fairly specific?
- Does it Includes appropriate references, including primary literature, especially for upper division?



## The Course Syllabus (continued)

- Does it introduce you as a faculty member, perhaps offering a few personal facts; office hours, contact information?
- Does it give students an understanding of your approach to teaching?
- Many syllabi include a student contract for attendance.
- Are course prerequisites listed?
- Are course assignments and due dates clear?



## The Course Syllabus (continued)

- Is it clear on how performance will be evaluated, e.g., essay exams, multiple choice, term papers?
- Does it include a detailed grading policy (avoids misunderstandings in the future).
- Policy on attendance/make-up exams/ late papers/other related items..
- Other administrative matters and relevant university policies.



## The Course Syllabus (continued)

- Support services, e.g., math help labs or writing labs, library services.
- Statement on academic integrity and plagiarism.
- ADA statement.
- Strategies for Success in the course.
- Course Calendar: My personal preference is to separate the Course Calendar from the Syllabus and treat the Calendar as a course outline with at least three specific objectives for each class period.



### All of the SUS institutions have teaching centers

- https://teachingcenter.ufl.edu/
- https://www.fctl.ucf.edu/
- https://www.unf.edu/cirt/
- https://uwf.edu/academic-affairs/departments/center-for-teaching-learning-andtechnology/
- https://teaching.fsu.edu/
- https://www.usf.edu/atle/teaching/
- https://www.fau.edu/ctl/
- https://www2.fgcu.edu/LucasCenter/new-faculty-academy.html
- <a href="https://www.famu.edu/academics/undergraduate-academics/undergraduate-student-success-center/index.php">https://www.famu.edu/academics/undergraduate-academics/undergraduate-student-success-center/index.php</a>
- <a href="https://www.ncf.edu/academics/academic-support-services/academic-resource-center/">https://www.ncf.edu/academics/academic-support-services/academic-resource-center/</a>
- https://cat.fiu.edu/
- https://floridapoly.edu/instructional-technology/index.php

# In addition to our own teaching centers there are quite a few sources offering advice and guidance regarding teaching.

- Teaching in Higher Ed
   (https://teachinginhighered.com/)
- The Faculty Guild: Now Lumen Learning (https://lumenlearning.com)
- Chronicle of Higher Education collection of articles on teaching offered for sale.
- Inside Higher Ed regularly publishes articles on teaching: https://www.insidehighered.com/reports/2022/11/14/meeting-needs-todays-learners



## A couple of references to Al and teaching

- A New Muse: How Guided AI Use Impacts Creativity in Online Creative Writing Courses: https://ecampus.oregonstate.edu/research/wp-content/uploads/Bushnell-Harrison-2025.White-paper.pdf?utm\_source=Iterable&utm\_medium=email&utm\_campaign=c ampaign\_13447558\_nl\_Teaching\_date\_20250508
- The Faculty Guide to Getting Started with Gen AI. Grammarly and U Texas Austin. 2025. 1-55.
- Artificial intelligence in education: A systematic review. 2024. In: Expert Systems with Application 252 (2024) 124167, 1-19.
- Artificial intelligence in higher education: the state of the field. International Journal of /educations: Technology in higher education. 2023. 1-22.

### A couple of more references to Al and teaching

- Adapting to AI: how to understand, prepare for, and innovate in a changing landscape. Chronical of Higher Education. 2024. 1-45.
- AI will transform teaching and learning. Let's get it right. 2025. <a href="https://hai.Stanford.edu/news/ai-will-transform-teaching-and-learning">https://hai.Stanford.edu/news/ai-will-transform-teaching-and-learning</a>.
- Attainment with AI: Making a Difference in College Completion with Artificial Intelligence. 2023. 1-50. Complete College America