

## Mathematics Education 229 Tentative Syllabus/Schedule, Fall Semester 2017

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### Place and Time:

T 10:00-11:50 am, Sci. A212

### Instructor and Office Hours:

Dr. Senfeng Liang

Office: D329 Science

Email: sliang@uwsp.edu

M 10:00 am– 11:50 am; W 11:00 – 11:50 am, or by appointment

If you need to meet me, notify me in advance (check the google link). Please write **M Ed229 \_ your full official name** in the subject line of the email. For example, it should look like M Ed229 \_First name Last name. Always use **full official name** in All communications (e.g., at the end of an email). **No nick name** please!

### Course Description:

**M ED 229. Teaching Elementary School Mathematics I.** 1 cr. Principles, goals, methods, and techniques. Only for transfer students who did not take Math 228 at UWSP. Prereq:3 credits of mathematics equivalent to MATH 228

### Course Goals:

1. To develop pedagogical content knowledge related to PreK-5 mathematics, particularly in the domains of problem solving, number sense, operation sense, counting and place value, computation, and algebra as it relates to Number & Operations.
2. To become familiar with the NCTM (2000) K-5 Number and Operations standard and process standards and Common Core State Standards for Mathematics (CCSS-M).
3. To become familiar with and implement curricular materials and manipulatives that support standards-based teaching.

### Required Materials:

Binders to organize class handouts and assignments; colored pencils, and a scientific calculator (TI-30 type is sufficient; no other media device can be used as a calculator)

### Texts:

Van de Walle, J.A., Karp, K.S., & Bay-Williams, J. M. (2012). *Elementary and Middle School Mathematics: Teaching Developmentally* (8<sup>th</sup> ed.). Boston, MA: Pearson. **(TEXT RENTAL)**

National Council of Teachers of Mathematics. (2000). *Principles and Standards for School Mathematics*. Common Core State Standards for Mathematics.

Additional materials are possible (will be provided as handouts in paper or electronic version).

### Tentative Course Requirements:

#### *1 Teaching Practicum*

You will prepare and teach one lesson in a local school classroom. The lesson plan should demonstrate creativity, knowledge of mathematics, knowledge of mathematics pedagogy, and knowledge of generally accepted pedagogical practices. The lesson plan content should be within this course. After you finish the teaching, you will write a reflection. More specifics about this activity will be provided later.

#### *2 Reading comments:*

You will be required to read several chapters from the book of Van De Walle et al. and other materials. For each reading assignment you read, you need to write three comments/reflections (but not summaries) and two questions and review at least three other people's comments/reflections or questions (be specific). This activity will enrich discussions of these chapters. Peer reviews like this won't count: "I agree with what you said."

Note: Peer-review of writings. For all your comments/writings, you will need to review 1-3 papers. The reviews will help the authors to write a stronger report. Thus, even though positive encouraging comments are appreciated it is more valuable to provide the authors with **constructive suggestions**. Revised writings based on peer-reviews tend to received higher points than those submitted without any insights from others. For writings need to peer-reviewed, we will use google documents. Thus you need to create a google account. **Fail to complete peer-review will result in losing your points substantially.**

### **Class Responsibilities:**

#### *1 Attendance and Participation:*

Attendance and full participation are very important for this course. Absences must be documented either medically or justified by other reasons considered valid by the University. If you have evidences for medical reasons please contact Disability and Assistive Technology Center (DATC) (609 Albertson Hall, 715-346-3365) and ask them to notify me the reason of absence. Every time your absence is unexcused, you miss 1 points up to 3 absences. If you miss 4 or more classes without a valid excuse, you will not earn any credit for attendance and participation. **You are responsible for all announcements and assignments made in your absences.** Practicum experience is required for this class. If you miss the practicum experience due to extenuating circumstances, you must arrange to make up a missed practicum on your own. Major emergencies will be handled on an individual basis. **Media phone devices are not to be turned on or used during class time.** Activities such as texting messages will results in lose your participation points.

#### *2 Conduct:*

I will treat you as professionals and I expect the same in return.

#### *3 Late Assignments and make-ups:*

No late Assignments will be accepted unless you have a reason that the university deems sufficiently compelling. Even if your assignment is accepted, you may lose points for being late. All written assignments must be submitted on or before the time/date indicated.

#### *4 Academic Integrity:*

“Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others’ academic endeavors. Students who violate these standards will be confronted and must accept the consequences of their actions.” A description of your rights and responsibilities as a member of the UWSP community can be found at <http://www.uwsp.edu/dos/Pages/Academic-Misconduct.aspx>

Individual assessments, such as individual assignments and exams, must be completed by you alone. Work completed collaboratively must clearly identify all contributors. *When utilizing outside references, all sources must be fully and accurately cited (use APA format).* All essays should be typed, single-spaced with 1" margins on all sides. You must use 12 pt. Times New Roman font. You should learn the APA format at: <https://owl.english.purdue.edu/owl/section/2/10/>

#### *5 More information of assignments:*

All essays should be typed, single-spaced with 1" margins on all sides. **You must use 12 pt. Times New Roman font.** You should learn the APA format at: <https://owl.english.purdue.edu/owl/section/2/10/>

*6 Disability Accommodations:* The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information about UWSPs policies, check here:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

If you have a disability and require classroom and/or exam accommodations, please register with the Disability and Assistive Technology Center and then contact me at the beginning of the course. I am happy to help in any way that I can. For more information, please visit the Disability and Assistive Technology Center, located on the 6th floor of the Learning Resource Center (the Library). You can also find more information here: <http://www4.uwsp.edu/special/disability/>

#### 7 Religious Beliefs:

Students' sincerely held religious beliefs will be reasonably accommodated with respect to all examinations and other academic requirements. According to UWS 22.03, you must notify the instructor within the first three weeks of classes about specific dates which require accommodation.

8 *Policies*: UW-Stevens Point values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, a set of expectations for all students and instructors have been developed. This set of expectations is known as the Rights and Responsibilities document, and it is intended to help establish a positive living and learning environment at UWSP. Check here for more information: <http://www.uwsp.edu/dos/Documents/CommunityRights.pdf>

9 *Extra credits*: You may earn extra credits in several ways, such as (other opportunities may be possible):

- a. If you volunteered to show your work on board you earn 0.5 point for each class. Even if you volunteered twice or more than twice, you earn 0.5 point for each class.
- b. No cell phone use in classroom. You earn **TWO EXTRA POINTS** if you never display a cell phone, other mobile devices, or a laptop, in the classroom. You can keep your devices in your bag but you cannot take them out for any reason. You should follow the requirement starting at the moment you enter the room until you left the classroom when class formally ends. Break time will be counted as well.

#### ASSESSMENT INDICATORS (tentative):

<i>Tasks</i>	<i>counts</i>	<i>points</i>	<i>notes</i>
Attendance and Participation	N/A	5	individually
Other assignments	varies	varies	individually
Reading comments	3*5	15	2 points for each reading' comments; 1 point for peer review
Lesson plans	1*15	15	in pairs
Lesson reflections	1*15	15	in pairs

Your grade will be assigned based on the following scale:

A: $\geq 94\%$	A - : $\geq 90\%$	B+: $\geq 87\%$
B: $\geq 83\%$	B- : $\geq 80\%$	C+: $\geq 77\%$
C: $\geq 73\%$	C - : $\geq 70\%$	D+: $\geq 67\%$
D: $\geq 60\%$	F: $< 60\%$	

**NOTE: The same grade will be assigned for both MATH 228 and MATH ED 228.**

#### Besides office hours, there are many resources available to you!

Tutoring in Math and Science: Drop-in help and by appointment; TLC; Free!

WRITING ASSISTANCE: Drop-in help and by appointment; TLC; Free!

MATH ROOM: Drop-in help and by appointment; SCI A113; Free!

STUDY GROUPS: Meet with your peers on a regular basis.

**Estimated time needed for this course**

University guidelines suggest that students may need to spend 2-3 hours of preparation outside of class for every hour spent in class. If you have trouble in meeting or understanding course expectations, please come in during office hours, or make an appointment to discuss this with me immediately.

**Tentative Schedule – Math Ed 229, Fall 2017**

<b>W</b>	<b>Date</b>	<b>Readings (Van De Walle etc.)</b>	<b>Assignments due</b>
1	9/5	Introduction & warm-up Chp 1, Teaching math in the 21st century pp.1–10	
2	9/12	Chp 2, Exploring what it means to know and do math pp.13–29 Chp 8, Developing early number concepts and number sense pp.128–146	<b>Sun. 9/10</b>
3	9/19	Chp 14, Algebra thinking: generalizations, patterns, and functions pp.258–287 <b>NCTM Process Standards, pp. 52-71, 116-141, 182-209; (just read it, comments are not required)</b>	<b>Sun. 9/17</b>
4	9/26	Chp 9, Developing meanings for the operations pp.148–168 <b>NCTM Numbers and Operations Standard, pp. 32-36, 78-88; CCSS-M grade 1-3; (just read it, comments are not required)</b>	<b>Sun. 9/24</b>
5	10/3	Chp 12, Developing strategies for addition and subtraction computation pp.216–228 Chp 13, Developing strategies for multiplication and division computation pp.236–249	<b>Sun. 10/1</b>
6	10/10	Practicum review	<b>Lesson plan due on Sun., 10/8 Peer-review and final version due on Sun. 10/15</b>
7	10/17	Practicum	<b>Lesson reflection: draft due on Fri., 10/20; peer-review and final version due on Sun. 10/22</b>
8	10/24	Chp 11, Developing whole-number place-value concepts pp.192–214	<b>Mon. 10/23</b>

**Important Notes:**

- 1. All reading comments are on google. However, lesson plan and reflection need to be submitted on google and d2l.**
- 2. MARK ALL DUE DATES ON YOUR CALENDAR (DO NOT EXPECT ME TO REMIND YOU THESE DUE DATES).**
- 3. Grades given during the semester may not be disputed after one week of receiving the grade.**
- 4. Calculators may or may not be used, depending on the tasks.**