Elementary Chemistry
The University of Toledo
College of Natural Sciences and Mathematics
Department of Chemistry and Biochemistry, Chem1090 - 001-009
CRN 54358

Sections 001-009

Instructor: Dr. Xiche Hu
Email: Xiche.Hu@UToledo.edu
Office Hours: TWR 11:00 AM – noon
& by appointment, online only
Office Location: WO2277
Instructor Phone: 419-530-1513 (office)

Offered: Fall 2020
Course Website: Blackboard Learn
Class Location: REMOTE
Class Day/Time: TR: 10:00 – 10:55 AM (Online)
Credit Hours: 3

CATALOG/COURSE DESCRIPTION
For students who major in science, engineering or other fields which require chemistry as a prerequisite subject who have not had a previous course in chemistry and whose preparation is not sufficient to begin General Chemistry (CHEM 1230).

PREREQUISITES AND COREQUISITES
MATH 1200 with a minimum grade of C, or MATH 1320 with a minimum grade of C, or MATH 1340 with a minimum grade of C, or MATH 1750 with a minimum grade of C, or MATH 1830 with a minimum grade of C, or MATH 1850 with a minimum grade of C, or ACT Math with a score of 20, or Aleks Math Placement Test with a score of 046, or Math - Coll Algebra Placement with a score of 10, or SAT Mathematics with a score of 480, or MATH SECTION SCORE with a score of 510.

In order to succeed in Elementary Chemistry, your Math background should be sufficient. If you are not comfortable solving linear equations and working with exponential numbers, please contact me as soon as possible. Extra help in the form of online tutoring and SI sessions is available in the class (see below).

COURSE STRUCTURE AND COMPONENTS
Lecture sessions will be taught synchronously online via Blackboard Collaborate as scheduled. Lectures are designed to clarify concepts and provide examples of what is expected of each student. Attendance and participation are required in order to succeed in the class

Textbook is an important part of this course. The sections to be read are listed on the attached daily schedule. We recommend that you read the text before the lecture.

Recitation. Recitation sessions are required parts of the class, consisting of one meeting per week on the same day at the same time/place. The recitation period you are enrolled in corresponds to a specific section number; the day/time/place is listed on your schedule (Note: some schedules list the recitation period as “lab”, this is not a lab). Your recitation instructor will answer questions and ask you to the board to work the assigned homework problems. All recitations are taught by Teaching Assistants in a face-to face format. Complete the assigned recitation homework problems (listed in the Syllabus, corresponding to the end-of-chapter problems in the textbook) on paper before each recitation session. You will be told in advance which chapter(s) to complete each week.
ALEKS (Assessment and LEarning in Knowledge Spaces) online homework system is designed to create assignments tailored to the unique needs of each student. It is based on artificial intelligence. The first time you log in, ALEKS will ask a series of questions designed to assess exactly what you do and do not know about Math and Chemistry. After this initial assessment, you will have a list of topics to work through based on what you are ready to learn. ALEKS will not ask you to work on material you already know, nor will it ask you to work on advanced material until you are ready to do so. All ALEKS homework assignments have deadlines, usually twice a week - on Wednesdays and Sundays at midnight (see the Master Schedule for more details). You should include 2-3 hours, 2-4 times a week of ALEKS work into your schedule. Please refer to ALEKS privacy policies at https://www.mheducation.com/privacy.html

End-of-Chapter homework Homework is designed to help you develop basic skills and to understand and apply concepts presented in class and in the textbook readings. Assigned end-of-chapter problems are listed in the last page of this syllabus. Knowing how to solve these problems is necessary for mastery of the materials. The answers to some of these problems are provided in the back of the text. Complete on paper and bring with you to your Recitation class the end-of-chapter problems to earn participation points. All work has to be shown for problems involving Math.

Writing Assignments (WA’s) are opportunities for you to confirm your preparation and test your understanding. These will be accessible via blackboard and include a range of activities from answers to the homework you completed to problem solving that deal with essential principles and concepts of chemistry.

Quizzes are designed to test your knowledge and to provide feedback to instructors. You will have graded online quizzes for each chapter on Blackboard. You only get one chance to complete the quiz and it must be completed before the specified deadline and within the specified time limit (listed on the front of the quiz). You will also need to click on “save answer” after completing each question.

TEXTS AND ANCILLARY MATERIALS
1. Properly functioning computer with Internet access. This course contains streaming video and audio content.
3. ALEKS online homework is a part of Inclusive Access program, and you already paid for ALEKS subscription. It is available to you through Blackboard.
4. Non-programmable, non-graphical scientific calculator.

A package containing hard copy book, access card for e-book (same book) and iClicker code (not needed for the online format) is available through UT bookstore.

E-book can be also purchased here: https://www.vitalsource.com/custom/9781319291709

If you cannot afford the book at this time, Carlson Library at UT main campus has several hard copy books on reserve. These books can be checked out for 2 hours at a time for an exchange of ID.

TECHNOLOGY REQUIREMENTS
Browser Check Page
Students need to have access to a properly functioning computer throughout the semester. The Browser Check Page http://www.utoledo.edu/dl/helpdesk/browser-check.html will enable you to perform a systems check on your browser, and to ensure that your browser settings are compatible with Blackboard, the learning management system that hosts this course.

Software
Student computers need to be capable of running the latest versions of plug-ins, recent software and have the necessary tools to be kept free of viruses and spyware. The computer needs to run the following software, available in the UT Online Download Center.

- Word Processing Software
- Adobe Acrobat Reader
- Java Plugin Console
- Adobe Flash Player
- Adobe Shockwave Player
- Google Chrome Browser – Recommended

Internet Service
High-speed Internet access is recommended, as dial-up may be slow and limited in viewing lectures, downloading information and completing online homework and tests. This course does contain streaming audio and video content.

Use of Public Computers
If using a public library or other public access computer, please check to ensure that you will have access for the length of time required to complete tasks and tests. A list and schedule for on-campus computer labs is available on the Open Lab for Students webpage.

UT Virtual Labs
Traditionally, on-campus labs have offered students the use of computer hardware and software they might not otherwise have access to. With UT's Virtual Lab, students can now access virtual machines loaded with all of the software they need to be successful using nothing more than a broadband Internet connection and a web browser. The virtual lab is open 24/7 and 365 days a year at VLAB: The University of Toledo's Virtual Labs.

Learner Technical Support can be found here http://www.utoledo.edu/dl/students/learnersupport.html

ACADEMIC POLICIES
Academic Honesty: You are urged to refer to the university’s policy on Academic Honesty at http://www.utoledo.edu/dl/students/dishonesty.html. Violation of this policy can result in a course grade of F with additional university sanctions possible. You will be required to read and agree to follow class policy during the first week of classes.

Examination Policy: examination dates are given on the schedule. Exams will be conducted online within ALEKS homework system. Midterm exams will take approximately 1-2 hours and comprehensive final exam will take 2-3 hours of your time. Each exam will be available for 24 hours, you will be allowed to use the book and your notes and there will be no time limit (before the deadline). Extensions for the exams will be given to students who miss an exam under the conditions listed below.

- Students who will not be able to take an exam during scheduled time due to an irresolvable conflict with a major responsibility must provide some written documentation to verify the conflict. This situation may occur for student on official university business, including athletes. Approval must be obtained at least 7 days before the scheduled test date. The exam will be given at another arranged time.
- Students who cannot take an exam due to illness, car accident or similar extreme circumstance should inform their instructor of their difficulties as soon as possible. These difficulties must also be documented by a physician’s note, an accident report, etc. Absences due to COVID-19 quarantine or isolation requirements are considered excused absences. You should notify me as soon as possible if you are in quarantine or isolation and these absences may not require written notice.
You may use a calculator during the exams, it has to be non-graphical and non-programmable. The following calculator models are prohibited for use during exams: all TI Pro models (e.g., TI-30X Pro, TI-36X Pro), TI-College Plus, TI-36X II, Casio fx-991ES, Casio fx-115, and other programmable models. Use of graphical and programmable calculators, and cell phones is not allowed during exams.

Extensions, make ups or late assignments
Exam extension will only be provided if an absence is deemed excusable (see examination policy above). Missed exam must be taken not later than 2 weeks after its scheduled day and not later than last week of classes.

ALEKS extensions for missed or late assignments will be provided over the semester. If you need more extensions, a doctor note or other documented excuse must be provided. You need to request an extension within two weeks after the due date. It is highly recommended that you complete all ALEKS assignments on time to avoid requesting any extension due to their close interconnectivity and dependence.

Quiz extension may be provided if a documented absence is deemed excusable. Contact your instructor within a week from the quiz due date.

Writing assignment: an extension may be provided if a documented absence is deemed excusable. Contact your instructor within two weeks from the due date.

The comprehensive list of academic policies that pertain to you in this class and throughout your academic journey is listed here: http://www.utoledo.edu/policies/academic/undergraduate/.

COURSE EXPECTATIONS
1. Attendance and participation are required for the lecture and recitation classes
2. Read the book before the lecture, the schedule is listed below
3. You need to come to the recitation class prepared by completing homework end-of-chapter problems listed below; bring the textbook to the recitation class
4. ALEKS online homework assignments have to be completed before the deadline
5. Exams and quizzes need to be taken on scheduled days

If you need extra help, email your instructor at any time. You will not be graded or judged based on the questions that you ask! Seek online help in the Chemistry Help Center, LEC center and/or Supplemental Instruction (SI) sessions. Links are provided on Blackboard.

OVERVIEW OF COURSE GRADE ASSIGNMENT
Midterm Grading
Midterm grades are assigned on the 8th week of class and are used to assist students with determining their academic standing. Attendance is also recorded during the 8th week to meet state and federal laws regarding financial aid disbursement. Please note, if you are not attending class it could affect your financial aid (scholarships, grants, loans or Federal Work Study). If you decide you are not going to attend this class (or any other class you have registered for), you must formally withdraw (drop) from the course.

Recitation grading: students who attend recitation and can show the completed homework at the beginning of class will earn 3 recitation points each week: 1 point for attendance and 2 points for completed homework with all work shown.
Final Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation points (Recitation + WAs)</td>
<td>70 pts</td>
<td>8.75%</td>
</tr>
<tr>
<td>ALEKS homework</td>
<td>200 pts</td>
<td>25%</td>
</tr>
<tr>
<td>Quizzes on Blackboard (10 @ 6)</td>
<td>60 pts</td>
<td>7.5%</td>
</tr>
<tr>
<td>Midterm exams in ALEKS, 3 @ 90 pts each</td>
<td>270 pts</td>
<td>33.75%</td>
</tr>
<tr>
<td>Comprehensive final exam in ALEKS</td>
<td>200 pts</td>
<td>25%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>800 pts</td>
<td>100%</td>
</tr>
</tbody>
</table>

The final score for ALEKS homework will be calculated according to the following:

Total objective completion score (100% = 100pts) + Pie completion score (100% = 100pts) = 200 pts.

Participation in any SI session is worth 1 point, which will be added to the Participation Points.

It is a very high priority to your instructor to ensure fairness and equity in all grading aspects of the course. Anyone who has the prerequisites for this course and effectively studies the material can achieve a reasonable level of achievement and therefore an acceptable grade, i.e., a C or above. I don’t curve grades, so each of you can achieve the grade you are willing to earn!

Midterm exams will cover the material listed in the schedule below; the final exam is comprehensive and includes all of the material studied in class during the semester. All exams will be conducted online within ALEKS homework system.

Grade Scale: these are the minimum percentages and total number of points needed to receive the indicated grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93% or 744 pts</td>
</tr>
<tr>
<td>A-</td>
<td>90% or 720 pts</td>
</tr>
<tr>
<td>B+</td>
<td>87% or 696 pts</td>
</tr>
<tr>
<td>B</td>
<td>83% or 664 pts</td>
</tr>
<tr>
<td>B-</td>
<td>80% or 640 pts</td>
</tr>
<tr>
<td>C+</td>
<td>77% or 616 pts</td>
</tr>
<tr>
<td>C</td>
<td>73% or 584 pts</td>
</tr>
<tr>
<td>C-</td>
<td>70% or 560 pts</td>
</tr>
<tr>
<td>D+</td>
<td>67% or 536 pts</td>
</tr>
<tr>
<td>D</td>
<td>63% or 504 pts</td>
</tr>
<tr>
<td>D-</td>
<td>60% or 480 pts</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60% or &lt;480 pts</td>
</tr>
</tbody>
</table>

A grade of C (73% or 584 pts) or above AND taking the final exam are needed to enter CHEM 1230. If your grade in CHEM 1090 is C- or lower, you must repeat CHEM 1090 before continuing to CHEM 1230.

A course grade of Incomplete can be given only to those students who have completed all but a very small percentage of course requirements (usually final exam only) for an acceptable documented reason. The Incomplete must be removed before you take CHEM 1230.

UNIVERSITY POLICIES
Policy Statement on Non-Discrimination on the Basis of Disability (ADA)
The University is an equal opportunity educational institution. Please read The University’s Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.

Academic Accommodations
The University of Toledo embraces the inclusion of students with disabilities. I am committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that I can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are experiencing disability access barriers, or are interested in a referral to healthcare resources for a potential disability, or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office (419.530.4981, StudentDisability@utoledo.edu).
Your safety and well-being is very important; please take a minute to review Title IX, the Student Code of Conduct and other policies that apply to you as a student of the University: [https://www.utoledo.edu/title-ix/policies.html](https://www.utoledo.edu/title-ix/policies.html)

**ACADEMIC AND SUPPORT SERVICES**

**Course scheduling assistance:** Chemistry Department Secretary Ms. Samples is in the Room BO 2022, telephone 419-530-2698, email: Pamela.Samples@utoledo.edu. If you have further questions or if you need assistance, please talk to her. She takes care of all scheduling changes.

**Supplemental Instruction (SI)** is a student assistance program offered through First Year Experience support. Advanced students provide several structured study sessions on the material each week. Your participation is optional – though very strongly encouraged. Data indicates this assistance has been very valuable to students. Participation in each SI session is worth 1 participation point, and you can attend as many sessions as you want. All sessions will be conducted online.

**Chemistry Help Center** is a great place to receive online assistance. It is generally open all day Monday through Friday & evenings Monday through Thursday. No appointment is necessary. Follow this link: [https://us.bbcollab.com/guest/ce2a41f345ed4e9d939dd6e7b0ef0c63](https://us.bbcollab.com/guest/ce2a41f345ed4e9d939dd6e7b0ef0c63)

**Online tutoring support** for all UT students is available through the Learning Enhancement Center. Please follow this link to view a comprehensive list of [Student Academic and Support Services](https://www.utoledo.edu/studentaffairs/academic-support/).

**Instructor Office Hours Online** are times when you can join Blackboard Collaborate with questions about the course material. Our office hour times are listed at the top of the syllabus. Please send a brief email first.

**SAFETY AND HEALTH SERVICES FOR UT STUDENTS**

In addition to the university policies developed to ensure your health and well-being as a student, there are also a number of on and off campus resources available to support you, including a food pantry! Please use the following link to see some additional resources available to you: [Campus Health and Safety Contacts](http://www.utoledo.edu/studentaffairs/health-safety/). Link to Food Pantry: [http://www.utoledo.edu/studentaffairs/food-pantry/](http://www.utoledo.edu/studentaffairs/food-pantry/).

**SPECIAL COURSE EXPECTATIONS DURING COVID-19 PANDEMIC**

This is an unprecedented time for our Rockets community at the University of Toledo. In times of challenge, such as this, we come together to support each other and help keep the more vulnerable members of our community safe during the COVID-19 pandemic. If we all do our part, we will help to minimize the spread of infection and maintain engaging face to face class environments this fall. That is why we are asking all faculty, staff and students to adhere to the special course expectations described below. Please review the policies described below.

**Course Attendance**

In order to ensure that we self-quarantine if symptomatic, students, faculty and staff must perform a daily health assessment, based on [CDC guidelines](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/daily-checklist.html), before coming to campus each day, which includes taking your temperature. Students who are symptomatic/sick should **not** come to class and should contact the Main Campus Health Center at 419-530-3451. The University of Toledo has a [missed class policy](https://www.utoledo.edu/studentaffairs/academic-support/). It is important that you understand the attendance requirements for this course. Please engage with me if you have any questions about these requirements. **Absences due to COVID-19 quarantine or isolation requirements are considered excused absences.** You should notify me if you are in quarantine or isolation and these absences may not require written notice.

**Face Coverings**
To help keep each other safe, everyone must wear face coverings while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. Students will not be permitted in class without a face covering. If you have a medical reason that prevents you from wearing a face covering due to a health condition deemed high-risk for COVID-19 by the Centers for Disease Control and Prevention (CDC), you should submit a request for accommodation through the Student Disability Services Office (SDS) by completing this online application. You will need to provide documentation that verifies your health condition or disability and supports the need for accommodations. If you are already affiliated with SDS and would like to request additional accommodations due to the impact of COVID-19, please contact their accessibility specialist to discuss your specific needs.

Social Distancing
As further efforts to keep everyone safe, students should practice social distancing inside and outside the classroom, including when you enter and exit. Please maintain at least 6 feet of distance between yourself and others, follow posted signage, and pay attention to the seating arrangements in the classroom. It’s important that you do not remove stickers or tape from seats and/or tables, as they are there to provide guidance on the appropriate classroom capacity based on recommended social distancing between individuals. Please be conscious of your personal space and respectful of the space of others in the class.

Desks and Work Spaces
An important part of keeping our classroom spaces safe involves keeping them sanitized. We ask all students to sanitize their desks and/or work space before class begins, with the sanitizing spray and paper towels provided in the classroom.

Special Note
Although we have developed a gold standard plan for keeping each other safe during COVID-19, it’s important to note that, based on the unpredictability of the virus, things can change at any time. So please be patient and understanding as we move through the semester. If at any point you have any concerns about class, completing course work/assignments, and/or health concerns related to COVID, please let me know.

Please also know that we recognize the COVID-19 situation has placed additional burdens on many of our students. If, at any point in the semester, you experience difficulties meeting your basic needs, managing your different responsibilities, or maintaining your physical or mental health, we have a variety of resources that can help. Please review and utilize our Student Success resources and let me know if you have any questions.

COMMUNICATION GUIDELINES
As your instructor, I am here to help, and will do my best to respond to your email quickly. Please include the course section number in the email subject line. Students are expected to check their UT email account frequently for important course information. In addition, if you are having difficulty in the course or trouble understanding any aspect of it, please let me know as soon as possible. I would be happy to arrange a time to meet with you virtually if you feel that you have questions that would best be answered in real-time. Please email first to make an appointment. I want you to be successful in this course, so let’s work together!

Covid-19 pandemic and recent political and social events have caused fear, stress, and pain in many of us. Under these circumstances, it is completely normal to feel overwhelmed or anxious, and to have difficulty concentrating. I have designed this course with these challenges in mind, and I am committed to continuing to work with all of you to create a positive and supportive learning environment throughout the term. If your health, well-being, or school work are being
impacted by recent events, I encourage you to contact me and make use of the resources University of Toledo provides, which I have included in this syllabus.

**COURSE CONTENT AND DATES**

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATES</th>
<th>TOPIC</th>
<th>LEARNING OUTCOME(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/17-8/23</td>
<td>Introduction; Math prerequisites; Ch.1: Basic Concepts</td>
<td>1-2</td>
</tr>
<tr>
<td>2</td>
<td>8/24-8/30</td>
<td>Ch.1: Basic Concepts; Ch.2: Measurement</td>
<td>1-5</td>
</tr>
<tr>
<td>3</td>
<td>8/31-9/6</td>
<td>Ch.2: Measurement; Ch.3: Atoms and Atomic Masses</td>
<td>3-6</td>
</tr>
<tr>
<td>4</td>
<td>9/8-9/13</td>
<td>Ch.3: Atoms and Atomic Masses; Ch.4: Electronic Configuration</td>
<td>5-8</td>
</tr>
<tr>
<td>5</td>
<td>9/14-9/20</td>
<td>Ch.4: Electronic Configuration</td>
<td>7-8</td>
</tr>
<tr>
<td>6</td>
<td>9/21-9/27</td>
<td>Ch.4: Electronic Configuration; Ch.5: Chemical Bonding</td>
<td>7-10</td>
</tr>
<tr>
<td>7</td>
<td>9/28-10/4</td>
<td>Ch.5: Chemical Bonding</td>
<td>9-10</td>
</tr>
<tr>
<td>8</td>
<td>10/5-10/11</td>
<td>Ch.6: Nomenclature</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>10/12-10/18</td>
<td>Ch.6: Nomenclature; Ch.7: Formula Calculations</td>
<td>5, 9</td>
</tr>
<tr>
<td>10</td>
<td>10/19-10/25</td>
<td>Ch.7: Formula Calculations; Ch.8: Chemical Reactions</td>
<td>5, 11</td>
</tr>
<tr>
<td>11</td>
<td>10/26-11/1</td>
<td>Ch.8: Chemical Reactions</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>11/2-11/8</td>
<td>Ch.8: Chemical Reactions; Ch.9: Net Ionic Equations</td>
<td>11-12</td>
</tr>
<tr>
<td>13</td>
<td>11/9-11/15</td>
<td>Ch.9: Net Ionic Equations; Ch.10: Stoichiometry</td>
<td>5, 12</td>
</tr>
<tr>
<td>14</td>
<td>11/16-11/22</td>
<td>Ch.10: Stoichiometry</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>11/23-11/29</td>
<td>Review</td>
<td>1-12</td>
</tr>
<tr>
<td>16</td>
<td>11/30-12/6</td>
<td>Final week</td>
<td>1-12</td>
</tr>
</tbody>
</table>

Make sure that your travel and employment plans do not conflict with this schedule!

**STUDENT LEARNING OUTCOMES**

Upon completion of this course, the student will be able to:

1. Classify matter into types
2. Write the symbols and names for common elements
3. Use dimensional analysis to do unit conversions and solve problems that use exponential notation
4. Use the correct number of digits to indicate the precision of a measurement or a calculated result
5. Solve problems that use density, mass, volume, temperature, energy, wavelength, moles, atomic and molar masses, percent composition, the empirical and molecular formulas, including stoichiometry problems
6. Explain the atomic structure using subatomic particles
7. Write full and abbreviated electron configurations for the elements; identify shell, subshell, and orbitals using quantum numbers
8. Draw energy diagrams for atoms and ions
9. Interpret and write the chemical formulas and names of ionic and covalent compounds
10. Draw electron dot (Lewis) diagrams for atoms and molecules
11. Balance chemical equations and predict the products of the reaction
12. Write net ionic equations for reactions in aqueous solution and to interpret such equations

**RECITATION HOMEWORK**

**Example:** if the following problems are assigned: 1.9, 12, 13, 15 from chapter 1, it means that you need to do problems 1.9, 1.12, 1.13 and 1.15 from the book, p. 20-21.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>End-of-chapter textbook problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.9, 12, 13, 15, 16, 22, 23, 26, 30, 33, 34, 49, 51, 52, 53, 54, 55, 66, 67</td>
</tr>
<tr>
<td>2</td>
<td>2.6, 19, 23, 25, 29, 31, 32, 48, 54, 61, 64, 67, 70, 81, 82, 83, 86, 95, 104, 107</td>
</tr>
<tr>
<td>3</td>
<td>3.5, 18, 19, 26, 39, 45, 48, 53, 54, 56, 57, 58, 68, 73, 89, 91</td>
</tr>
<tr>
<td>4</td>
<td>4.4, 13, 14, 17, 19, 23, 25, 26, 33, 37, 38, 39, 41, 51, 57, 58, 59, 69, 73, 75</td>
</tr>
<tr>
<td>5</td>
<td>5.4, 9, 27, 29, 36, 37, 38, 39, 45, 48, 49, 52, 53, 69, 71, 72, 75, 79, 102</td>
</tr>
<tr>
<td>6</td>
<td>6.1, 3, 6, 7, 8, 10, 13, 22, 24, 27, 28, 30, 41, 46, 47, 51, 52, 57, 68, 84</td>
</tr>
<tr>
<td>7</td>
<td>7.9, 14, 18, 20, 32, 36, 40, 53, 54, 56, 62, 63, 75, 76, 85, 87, 88, 92, 96, 103(a,b,c), 107</td>
</tr>
<tr>
<td>8</td>
<td>8.16, 23, 26, 30, 32, 34, 36, 40, 43, 45, 56, 58, 61, 68, 71, 78, 79, 85</td>
</tr>
<tr>
<td>9</td>
<td>9.4, 5, 12, 13, 22, 27, 28, 29, 32, 34, 36</td>
</tr>
<tr>
<td>10</td>
<td>10.1, 3, 11, 19, 24, 26, 33, 39, 43, 46, 47, 57, 58, 61, 67, 74, 83, 88, 92, 96, 100, 104, 114</td>
</tr>
</tbody>
</table>