ITM 490 Senior Project   Spring 2016   Syllabus/Schedule

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Course Web Site  https://sites.google.com/a/boisestate.edu/itm490-2016/

Course Overview

Perspective
ITM490 is not really a course; think of it like this…. You are working for a 26 person consulting company called 490Inc. We do systems development and related work for clients. Anson is the head of the company.

Currently, 490Inc has 4 contracts with clients: 2 higher ed, 1 a for profit startup, and 1 non-profit. The types of projects are also diverse, spanning development of a web application, evaluation and installation of a purchased system, a BI and analytics development, and a packaged workflow system implementation.

You and two or three other staff are working on each of these projects for one of 490Inc’s clients. As you work, you are very conscious that your company and your job depend on providing outstanding customer satisfaction. You have also heard that Anson is a diehard about managing the project—“Chaos my #%@!” he is known to mutter under his breath.

Anson is betting the house on an agile project management approach called SCRUM. You’ve read enough to know that the methodology has a lot of potential to improve projects. But it does mean some extra juggling of new project management terms and practices at the same time you are trying to get product out the door.

Logistics
490Inc has a very flexible working policy with one exception—Thursday nights. All teams, and all team members, are here to work on Thursday nights from 6:00 until 8:30 or 9:00. Nothing should interfere with that time! You have no unexcused absences.

Thursday nights are Team Work Time. Also, Anson is there dropping in to listen and to give advice or feedback on things you are doing. Sometimes, other consultants will drop in to help. Some Thursday nights start with just-in-time trainings to learn SCRUM or for brief professional development seminars. In addition, every other Thursday is a Sprint Night when your team wraps up one sprint (iteration) and plans the next. Every Thursday night, however, will be 50% to 100% Team Work Time.

Course Learning Objectives
The point of 490Inc. if for you to learn by doing, learn from your team, learn from your initiative. It is NOT about staying awake through Anson’s lecturing for hours on end.

Your learning entirely depends on your active participation and initiative. What I hope you take away from this are some of the following:

1. **How to plan an IT project**, and use the plan to manage/coordinate the team’s work; create and present regular progress reports to stakeholders.

2. **How to gather and validate requirements from real, human stakeholders**; and effectively adjust to changes in requirements.

3. **How to design and evaluate solutions** that meet business constraints and client needs.

4. **How to actively seek out information** from the web, clients, instructor, consultants and others.
5. **How to communicate effectively** with team members, clients, and management (instructor and consultants)—one on one, in groups, in meetings.

6. **How to coordinate your work** effectively in a small team proactively coordinating your work with others and working with an appointed team leader (or as team leader).

7. **How to regularly examine and improve** your personal and team work processes.

### Roles and Responsibilities

**Teams**

- **Your team is 100% responsible**—for its project delivery and client satisfaction.
- **Your team is collaborating**—you will meet 1-2 times per week (including Thursday night)
- **Your team is “self-organizing”**—the Team Leader has some important responsibilities, but they are not the decision maker—the team is.
- **Your team is flexible**—who takes on certain tasks, and how they are done, will change and adapt
- **Your team is focused on improvement**—you will take time to reexamine how your team is working, communicating, accomplishing its work, and put effort into making changes to improve its outcomes

**You, as a Team Member, are responsible for …**

- **…Volunteering**—stepping up to take on the work that needs to be done
- **…Participating**—fully engaging in team discussions, offering ideas, helping one another, listening respectfully to others
- **…Delivering**—completing the tasks that you commit to on time. Your team must be able to rely on you to do what you say you will do, or to speak up early if you can not do it. If you are having problems, ask for help. If you will be late, say so early and explain what you will do.
- **…Working**—you should put in, on average, 10 hours each week (including Thursday night). If you do not have enough tasks, then it is your responsibility to talk to your team.

**Team Leader/Scrum Master**

The Team Leader/Scrum Master is responsible for both types of roles, appointed by the head of 490Inc.

As **Scrum Master**, he/she is responsible for facilitating project work and management processes, especially monitoring and raising issues regarding the project itself. Formal definitions point to (1) facilitating team Scrum processes and (2) removing obstacles.

One key difference between a Scrum Master (SM) and Project Manager (PM) is that the PM tends to have more managerial responsibility for the project outcome—it is his/her head on the block if it fails. So, a PM has more managerial and decision making authority over the project and team. Versus the SM, who is facilitating processes and the go-to for removing obstacles to progress. The entire Scrum Team shares managerial responsibility for the project outcomes, and so shares decision making.

The **Scrum Master does not make final decisions or dictate to each person what to do**—that is the responsibility of the team and every individual team member.

In 490Inc., the Scrum Master has some specific duties to do or delegate:

- **run key Scrum meetings**—the Sprint Planning Meeting, Sprint Retrospective, and Daily Scrum
- **coordinate development, revision and tracking of release and sprint plans & backlogs**
• ensure that information in the agile project management tool is relevant and up to date
• record task assignments for all team members
• coordinate regular reviews and tests of work products and processes by team members, client, Anson, any involved consultants to catch and correct defects as early as possible

As Team Leader, he/she is focused more on the “health” of the team and members. The Team Leader monitors and raises issues related to the following areas:

• communications among team members— are constructive, inclusive and respectful
• communications with clients— are timely, positive, open, and meeting client and team needs
• communications with Anson and other consultants— are constructive, frequent, and ongoing
• fair work performed by team members— all team members can and do participate in constructive and relevant tasks for the project that apply learned skills and encourage development of new skills

Clients
Your client has “hired” 490Inc to do a project that they need done, but do not have the staff to do. Your job is to involve the client in identifying, prioritizing and testing your work. You need to build a positive, ongoing relationship with your client based on trust, respect and shared understanding. This requires special attention to the relationship. Get to know them individually and organizationally, communicate a LOT, set very clear and specific expectations for who, how, what and when. And…..

No surprises!

Build your client’s confidence and involvement by keeping them honestly informed of your progress and obstacles. Never intentionally or unintentionally surprise them!

Instructor

I play a few different roles.

• Consultant -- Usually I am your consultant. I will review items and give you feedback as you go. If your team gets stuck, I can help you find solutions to become ‘unstuck’. For specialized technical problems or tools, I can often bring in an IT professional to provide consulting or training assistance on an as-needed basis.

Note about Consultants
Whether the consultant is me or someone else, if you were paying a lot for their services, as in the real world, you would make sure that you were ‘using’ the consultant to your advantage. Same thing here. Ask their opinion; discuss ideas with them; ask them to review your plan or design or whatever. You have nothing to lose and everything to gain.

• CEO – As CEO of 490Inc., I set general expectations for performance and boundaries around methods. Our “company” has been providing high quality, Information Systems, development and management expertise to the Treasure Valley since 2002. Our methodology involves agile, Scrum project management and high levels of client involvement throughout the project. I will conduct some limited training of all members, then work with each team and Scrum Manager to effectively and appropriately apply our methods.

• Instructor/Grader -- You will not see me in this role except for (a) after the project is completed, and (b) under dire situations in which your team is having “major issues” or (c) you as an individual is having major issues. I will regularly give you feedback as a consultant or CEO, but not as an Instructor/Grader unless things get bad. There are no points and grades along the way, only feedback.
Grades, Evaluation, Course Requirements

In short, this is what you need to know about a grade in ITM490:
⇒ I treat this as a consulting company, not as a traditional class. So, unless you ask, or I become concerned about your performance, I will not be talking about grades.
⇒ This is a real experience and a safe place to make a mistake. Your grade will not suffer if you make a mistake. It will only suffer if you keep making the same mistake.
⇒ If you are showing initiative, actively contributing, and keeping involved, you will receive a good grade.
⇒ Any time you are concerned, ask your team members or ask me for feedback.

Grade Criteria

| ‘A’ grade | • you contribute--actively and productively--to the teams products, processes and improvement  
|           | • you participate—you make meetings, volunteer for tasks, provide assistance to others  
|           | • you take responsibility—you fulfill your commitments on time, you raise issues when you see them, and actively support decisions when made by the team  
|           | • you improve—it is ok to make mistakes, have lapses or shortcomings. We all do. But the point is whether you are aware and willing to invest effort to improving in the future. That is, the mistakes, lapses, or shortcomings do not keep repeating.  
|           | • you complete—timely and in good faith—the few traditional classroom-type requirements from the instructor |

‘B’ or ‘C’ grades

If you less than a full member of your team (the ‘A’ criteria) for a significant portion of project, you will receive a lower grade. Improvement is the key. If you are not open to hearing or addressing your mistakes, lapses or shortcomings, your grade will drop.

‘F’ grades (and possible early expulsion)

I’ll be honest, I have only given a few ‘F’ grades. You can earn one, however, for behaviors such as the following:
• skipping class nights meetings, or frequently coming late/leaving early
• likewise for other Team meetings
• not doing work needed by the team
• not taking work assignments, not completing them, or procrastinating
• behaving toward others in a way that is disrespectful, bullying, uncompromising, unresponsive, or mean-spirited

Evaluation

I assess the same things that most managers assess, at the team and individual level.

☐ Product
  o Do your team products meet the client’s real needs?
  o Do your individual products contribute effectively to the team products?

☐ Process
  o Does your team make steady progress toward completing the project? Is your process (plan, schedule) documented, published, shared with the client and consultants, etc.?
  o Does your team maintain effective communications with the client and consultants?
Do you individually contribute to the team’s process, decisions, planning, and communications?

**Improvement**
- Does your team regularly and intentionally review its products and processes to find ways to improve? Does it make changes to improve? Does it regularly and intentionally seek input from client and consultant?
- Do you individually ask for and respond to feedback on your own work and work processes? Do you take actions to try to improve?

### 360 Degree Evaluation Process

360 degree evaluation is commonly used in industry. It means collecting evaluation information about you from all around you—your work colleagues, clients, managers, subordinates, and yourself. Specifically:
- Yourself (self peer assessments, journal entries, final retrospective)
- Your team members (team peer assessments)
- Your client (final assessment of product, process, improvement, and team)
- Other consultants (if involved, consultants will be asked for assessments of teams they worked with)
- Your instructor (everything above and my own notes from semester)

### The Few Traditional Class-Type Requirements

I promise that these will never take more than 15-30 minutes of your individual time per week for traditional class-type requirements. The requirements I ask you to complete are the following:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Frequency</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Team Peer Assessment</strong></td>
<td>5-6 times during semester; takes 10-15 minutes to fill out</td>
<td>You receive an email with link, and 2-3 days to complete assessment.</td>
</tr>
<tr>
<td><strong>Expectations</strong>: (a) Missing 2 will reduce your final grade. (b) Real, honest constructive, positive &amp; critical, feedback is needed about yourself and each team member. The purpose is to help each person see their team/project behaviors from the eyes of their team in order to improve their team skills.</td>
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<td><strong>Personal Journal Reflection</strong></td>
<td>Min. every 2nd week; 10-15 minutes</td>
<td>BlackBoard Journal</td>
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<tr>
<td><strong>Expectations</strong>: (a) Missing 2 of 8 will reduce your final grade. (b) Entries should be somehow related to the 490Inc—project, client, team, personal challenges, new insights, technologies, etc. Good entries are when you use your journal writing to explore and learn from your experiences, observations, challenges, etc.</td>
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<tr>
<td><strong>Cross-Team Exchanges</strong></td>
<td>Your team will lead 2 exchanges during semester; 15-20 min. each</td>
<td>I will determine the team, topic, and class night for each exchange. Your team will be notified 3 days or more before the class night.</td>
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<tr>
<td><strong>Expectations</strong>: (a) Each team member should be active in at least 1 of your team’s exchanges. (b) Each team will lead two exchanges. (c) Exchange topics will range from presentations to open discussions. I will ask teams to lead on topics that are central to their project, client, or technology. Some examples could be: demo team’s project mgmt. technique; demo their system and discuss decisions behind it; leading a brainstorm for class on how to better engage client in sprint testing.</td>
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<tr>
<td><strong>Team Project Retrospective</strong></td>
<td>At end of semester; Due on Thurs of Finals Week</td>
<td>Mid way through semester instructions for the Team Project Retrospective will be issued</td>
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</tbody>
</table>
| **Expectations**: (a) Each team member will do a personal retrospective (b) Each team will compile and evaluate samples of items created during the project related to their
project management and project creation. These will include specific documents and your team evaluations of strengths and weaknesses. This compiled report will assist me in reviewing your project, and it provides you a means of taking important learnings from this project with you into your career.

Client Checkpoint Expectations

The three Client Checkpoints are major milestones (see Figure 1). These are important, formal meetings attended by with team, client and instructor. They must be pre-schedule, and include agenda, professional presentation, handouts, taking careful notes. Most are held at the Client’s place (or I can set up a meeting room here) and scheduled two weeks in advance.

![Figure 1 Key Project Milestones—Client Checkpoints]
Client Checkpoint Deliverables  (See ITM490 SOW powerpoint)

1) First Checkpoint  -- Approve Statement of Work
Formally present the SOW (Statement of Work). Get client feedback and approval to validate your understanding of the project and your approach to it. Your goal is to forge a shared understanding and expectations on the products and the process for completing them.
- Proposed Statement of Work
- Product Backlog
- Other project-specific deliverables

2) Second Checkpoint  -- Mid-Point Progress Review
Formally conduct a mid-way review of progress made and of work processes. This is a time to regroup if necessary, re-scope what can be accomplished, re-examine processes for working and communicating with client, review overall progress made on product. Outcome is client feedback and buy-in to project.
- Product Demonstration
- Review and reprioritize overall Project Plan, Product Backlog and Sprint Backlogs
- Presentation/discussion of changes to SOW and other issues
- Other project-specific deliverables

3) Third Checkpoint – Hand-Off Final Deliverables  (See ITM490 Final Project Deliverables)
Formally hand-off the final project report and deliverables to the client. Review the entire work completed against agreed requirements in SOW. Discuss next steps for client. Get closure on the project.
- Final Client Project Notebook
- Final Client Presentation
- Required project-specific deliverables

Team Project Retrospective  (See ITM490 Final Project Deliverables)
This portfolio is due by Thursday of Finals Week. The intent is to document your learning on the project. This will include the individual reflections from each team member, and the lessons learned from the team. You will receive further instructions mid-way through the semester.

Team Project Management Expectations
You have a lot of flexibility to run the project as you wish, as long as you apply the following practices. In addition to the client, the head of 490Inc. wants to make sure you are really managing the project.
- maintain a team web site in Google Apps—Sites as your documents repository with final and in process files
- maintain a Trello (or other tool) site on the web that is kept up-to-date with your Product Backlog, each current and past Sprint backlogs and tasks, estimates and priorities, actual time worked per task and time remaining.
- conduct a Scrum Standup Meeting at least once a week, and post a record on your team site
- input individual peer assessments a Team Process Improvement Plan when asked to do so
- develop a client communications plan with the client and make sure to fulfill expectations you set with the client.
### Spring 2016 Course Schedule

(See Course Site for updated schedule)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Class Meetings</th>
<th>Sprints</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Th 1/14</td>
<td>Course and SOW Overview SCRUM training part 1—Principles, Stories; Team mtg</td>
<td>Sprint#0 - Planning</td>
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<tr>
<td>2</td>
<td>Th 1/21</td>
<td>SCRUM training part 2—Rally &amp; Product Backlog</td>
<td>Sprint#0</td>
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<tr>
<td>3</td>
<td>Th 1/28</td>
<td>SCRUM training part 3—Sprint Planning</td>
<td>Sprint#0</td>
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<tr>
<td>4</td>
<td>Th 2/4</td>
<td>Team Work Night Prepare for Client Checkpoint</td>
<td>Sprint#0</td>
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<td></td>
<td></td>
<td><strong>Client Checkpoint 1—Schedule</strong></td>
<td><strong>Outcome:</strong> Approve Statement of Work</td>
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<td><em>Between 2/5 &amp; 2/10 (as early as 1/29)</em></td>
<td><em>(Formal Meeting with agenda, presentation)</em></td>
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<td>5</td>
<td>Th 2/11</td>
<td>Sprint Night</td>
<td>Sprint #0 - Retrospective</td>
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<td></td>
<td>Sprint #1 - Planning</td>
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<td>6</td>
<td>Th 2/18</td>
<td>Team Work Night</td>
<td>Sprint #1</td>
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<tr>
<td>7</td>
<td>Th 2/25</td>
<td>Sprint Night</td>
<td>Sprint #1 - Retrospective</td>
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<td>8</td>
<td>Th 3/3</td>
<td>Team Work Night</td>
<td>Sprint #2</td>
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<tr>
<td>9</td>
<td>Th 3/10</td>
<td>Sprint Night</td>
<td>Sprint #2 - Retrospective</td>
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<td>Sprint #3 - Planning</td>
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<tr>
<td>10</td>
<td>Th 3/17</td>
<td>Team Work Night</td>
<td>Sprint #3</td>
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<td></td>
<td><strong>Client Checkpoint 2—Schedule</strong></td>
<td><strong>Outcome:</strong> Mid-Point Progress Review</td>
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<td></td>
<td><em>Between 3/11 &amp; 3/18</em></td>
<td><em>(Formal Meeting with agenda, demo, presentation)</em></td>
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<td>XX</td>
<td>3/21 – 3/25</td>
<td><strong>Spring Break</strong></td>
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<tr>
<td>11</td>
<td>Th 3/31</td>
<td>Sprint Night</td>
<td>Sprint #3 - Retrospective</td>
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<td>Sprint #4 - Planning</td>
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<tr>
<td>12</td>
<td>Th 4/7</td>
<td>Team Work Night</td>
<td>Sprint #4</td>
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<tr>
<td>13</td>
<td>Th 4/14</td>
<td>Sprint Night</td>
<td>Sprint #4 - Retrospective</td>
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<tr>
<td>14</td>
<td>Th 4/21</td>
<td>Team Work Night</td>
<td>Sprint #5</td>
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<tr>
<td>15</td>
<td>Th 4/28</td>
<td>Final Team Work Night</td>
<td>Sprint #5 - Retrospective</td>
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<td><strong>Client Checkpoint 3—Schedule</strong></td>
<td><strong>Outcome:</strong> Hand-Off Final Deliverables</td>
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<td><em>Between 4/25 &amp; 5/2</em></td>
<td><em>(Formal Meeting with agenda, demo, presentation)</em></td>
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#### Sprint Night Agenda
1. (15 min) Team Stand-Up Scrum Meeting
2. (15 min) Retrospective discussion ➔ Post Sprint Retrospective
3. (60 min) Plan next Sprint ➔ Post Upcoming Sprint Plan
4. (15 min) Demonstrate/review sprint deliverables with instructor ➔ Post Sprint Deliverables

#### Team Work Night Agenda
1. Just-In-Time Stuff (announcements, reminders, JIT training for everyone, Q&A, exchanges, etc.)
2. Team Stand-Up Scrum Meeting
3. Team working meetings, collaborative work, individual work and consultation