

**PROJECT MANAGEMENT IN INFORMATION TECHNOLOGY**  
**УПРАВЛЕНИЕ ПРОЕКТАМИ В ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЯХ**  
**School of Advanced Studies**  
**Quarter 4, April 20 to June 11, 2020**

**Instructor/s:** Munesh Chauhan [m.chauhan@utmn.ru](mailto:m.chauhan@utmn.ru)

Available for consultation via pre-scheduled Zoom appointment

**Contact Hours:** 48

**Type of Course:** IT Major

**Meeting Times:** Monday 17:40-19:10, Friday, 17:40-19:10, Saturday, 10:40-12:10.

**Prerequisites**

To take this course, students will need to be:

1. Familiar with working with software tools and systems
2. Interested in how a software is implemented and rolled out for commercial use
3. Able to understand and master new software tools both GUI-based and command-line based.

**Related Minors:**

This course counts toward the minor in IT.

**Course Description**

IT project management is a critical skill that is in high demand in almost all medium to large tech companies. A software development task is primarily accomplished in a team setting, and thus it is essential to understand and be conversant with the existing tools and techniques that are employed for the successful completion of a project. Possessing software skill (in a required discipline) is essential but not the only prerequisite for being a successful developer. A current trend in the software industry is the establishment of startups where the key ingredient is a novel idea that works. Anyone can aspire to launch a startup as nowadays novel ways of funding are available in the form of venture capital and crowdsourcing. Unfortunately, most of the startups fail in the first few months of their inception. Among other reasons, one of the primary being the lack of skills to manage a setup. Hence, it becomes all the more imperative to develop this critical skill that always comes in handy in the management of an industrial enterprise.

**Course Structure**

The course basically revolves around planning, risk management, scheduling, resource management and monitoring of tasks that comprise and arise out of a typical software enterprise involved in the development of software for commercial use.

The pedagogy involves a combination of online lectures, case studies, seminars, software tools and assessments. An effort will be made to invite project managers in software companies to provide a first-hand glimpse as to how a project is developed through different phases, right from the inception to testing and the final roll out.

The entire course shall span 12 lectures and 12 seminar sessions. Out of these all 12 lectures will be delivered asynchronously. In case of seminars, 8 will be conducted asynchronously. The rest 4 seminars shall be done on a particular time and date (synchronously).

### Student Learning Goals

Students who successfully pass this course will be able to:

Learning goals	
Knowledge goal:	Develop a critical business acumen
Knowledge goal:	Become conversant with latest project management strategies
Practical skill:	Apply project management tools such as Gantt chart, PERT, Network diagram, etc. through case studies to maximize the outcomes at different stages of a project life cycle
Practical skill:	Plan and execute a medium sized project with a focus on optimization and efficiency
Practical skill:	Manage and motivate human resources involved that is so critical for any enterprise to succeed and flourish

### Required Coursework and Evaluation Criteria

The final grade for this course will be calculated as follows:

Assignment or Task	Due date/s	Percent
Case Study 1 (Taxonomy, decision trees)	In final class meeting of week 2	10
Case Study 2 (Network scheduling, Gantt chart)	In final class meeting of week 4	10
Midterm assessment	In final class meeting of week 5	30
Final Test	In final class meeting of week 8	50

This course employs 7-median (the number of grades above 7 and the number of grades below 7 do not differ by more than 1). Failing grades (0-3) are included in the calculation of the 7-rule.

All marks are provisional until the end of the course. The 7-rule WILL NOT be used in assessing individual assignments. It will only be applied to the final course marks, pending overall student performance. If general performance is low, a lower overall median/average may apply – if performance is outstanding, a higher overall median may apply.

#### Case Study 1 (10 %)

Case study 1 shall cover the study of different project management terms and their utilization in a given business case example. It will test the ability to apply decision trees for making decisions on the basis of the available data. This assessment shall carry an individual presentation that is half of the total weightage.

#### Case Study 2 (10%)

Case study 2 will test the ability of a student to develop timeline charts reflecting different project scheduling deadlines. This assessment shall carry an individual presentation that is half of the total weightage.

#### Midterm assessment (30%)

Midterm assessment shall cover the entire topics covered in the class in the previous four weeks. The test component shall comprise multiple choice questions, fill the blanks, short answer type questions and a single long answer type question.

#### Midterm Test Questions

1. How does a weighted decision matrix allow project managers to structure and solve a problem?
2. Which one of the following is not true about NPVs?
  - a. NPV uses a time series cash flow
  - b. NPV is only the sum of future cash flows
  - c. NPV is a method for appraising long-term projects
  - d. Sometimes risky projects may have positive NPV
3. What is the critical path method (CPM)? Discuss why CPM is generally considered as the longest full path on the project.

#### Final Test (50%)

The final test shall be a comprehensive assessment of all the topics covered with a major emphasis on the application of learned skills on real life events (given in the form of cases). The question types shall be similar to the one detailed in the midterm assessment.

#### Final Test Questions

1. Draw a Gantt chart for the following table of tasks.

Project start date: 12 June 2015			
Task Identifier	Task Description	Predecessor Task(s)	Time (days)
1	Establish project	-	2
2	Establish customer requirements	1	3
3	Produce software specification documents	2	4
4	Write test plans	3	1
5	Write code	3	2
6	Developer testing	5	2
7	System testing	4, 6	4
8	Write customer documentation	3	3

2. Draw a network diagram for the following table of tasks.

Task Identifier	Task Description	Predecessor Task(s)	Optimistic Time (O)	Most Likely Time (M)	Pessimistic Time (P)	Expected Time (T <sub>e</sub> )
A	Establish project		4	5	12	6
B	Establish customer requirements	A	2	3	4	3
C	Produce software specification documents	B	6	8	22	10
D	Write test plans	C	4	6	8	6
E	Write code	C	3	4	5	4
F	Developer testing	E	2	4	6	4
G	System testing	D, F	2	3	4	3
H	Write manuals	C	5	7	15	8

3. What is PMBOK? List and briefly explain any five knowledge area categories belonging to PMBOK.

### Canvas and Other Course Resources

This course has a website on Canvas <https://canvas.instructure.com/courses/1848801>. You should have received an invitation to join the course on Canvas two weeks before the start of classes. If you did not, double check your SAS email and then follow up with the instructor. All course readings, this syllabus, and any other course materials are available on Canvas.

All written assignments completed outside of class must be submitted via Canvas.

The following online courses are the part of the teaching process as the content of the prescribed lectures have been directly mapped with the following MOOCs (In case, these MOOCs are not available, the lectures will be in the form of powerpoint slides having similar content.):

- IT Project Management from Coursera  
<https://www.coursera.org/learn/it-project-management>
- Strategic Applications of IT Project & Program Management  
<https://www.edx.org/course/strategic-applications-of-it-project-program-manag>

### Hardware Requirements

A computer system with an internet connection. Students should be able to install recommended software during the course. The software will be open source in all cases.

### Course Literature

Here is a bibliography of literature that will assist you in studying and writing assignments. See the course schedule below for specific reading assignments.

- Project Management, Adrienne Watt, Open Textbooks for Hong Kong
- Talking to 'Crazy': How to Deal with the Irrational and Impossible People in Your Life, Mark Goulston, AMACOM; Reprint edition (July 10, 2018)
- #ProMa: Product Management Tools, Methods and Some Off-the-wall Ideas, Dinker Charak, Dinker Charak UNITED STATES; 2 edition (February 16, 2018)

### Course Policies and Expectations

1. It is mandatory for each student to complete each of the case studies and these tasks cannot be substituted by any other theoretical work.
2. Deadlines on Canvas are important and any delay shall be penalized in terms of deduction of 1 point per day of the total.

### Examination Format

The examination consists of a 45-minute test that consists of 20 questions. For full details on the format and grading, see the SAS policies section below.

### Course Schedule

Week	Date	Activity	Topics & Readings	Assignments
0	13.04-19.04	-	No classes	-
1	20.04	Lecture asynch.	IT Project Management Introduction	
	24.04	Lecture asynch.	Real options introduction and taxonomy	
	25.04	Seminar synch.	Case study on the topics taught	
2	27.04	Lecture asynch.	Applications for Real Options for IT Projects	Case Study 1 (Taxonomy, decision trees)
	1.05	Seminar asynch.	Valuation of Real Options Decision Trees	

	2.05	Seminar synch.	Case study on the topics taught	
3	4.05	Lecture asynch.	Work Breakdown Structure and Network Diagram	
	8.05	Lecture asynch.	Laddering, Lags and Gantt chart	
	9.05*	Seminar synch.	Case study on the topics taught	
4	11.05	Lecture asynch.	Estimation of Time, Cost and Resources	Case Study 2 (Network scheduling, Gantt chart)
	15.05	Seminar asynch.	Reducing Project Duration Linear Programming	
	16.05	Seminar synch.	Case study on the topics taught	
5	18.05	Lecture asynch.	Resource Scheduling	Mid-term assessment
	22.05	Lecture asynch.	Critical Chain Project Management	
	23.05	Seminar synch.	Case study on the topics taught	
6	25.05	Lecture asynch.	Risk Management	
	29.05	Seminar asynch.	Programme Evaluation and Review Technique (PERT) and Simulation	
	30.05	Seminar synch.	Case study on the topics taught	
7	1.06	Lecture asynch.	Agile Project Management	
	5.06	Lecture asynch.	Monitoring and Control	

	6.06	Seminar synch.	Case study on the topics taught	
8	8.06	Lecture asynch.	Audit of Projects	Final test
	12.06	Seminar asynch.	Closure of Projects	
	13.06*	Seminar synch.	Case study on the topics taught	

\* the class shall be rescheduled due to governmental holidays / being past module schedule.

## SAS Policies for Online Courses

*Please note the addition and updating of policies to reflect the realities of online teaching in Q4.*

### Technical Requirements and Responsibilities for Online Education

Professors and students are responsible for ensuring they have access to a computer and a stable Internet connection during all scheduled class meetings. This is to ensure that students get the most out of the online education format. If you have problems with your Internet, smartphones may be used as a backup option (as a wifi hotspot or to participate in class).

Course materials and all assignments will be made available on Canvas; all synchronous class meetings will be conducted over Zoom. All communication about the course and assignments must happen over Canvas or official email. The use of any supplementary platforms (discussion boards etc.) is at the discretion of the instructor.

Professors are required to post all resources for online teaching via Canvas before the start of each week. This includes: Any nonsynchronous lesson material, the invitations for individual Zoom meetings, and any other materials required to complete the course.

All synchronous classes will be recorded and made available via Canvas on the same day for a minimum of one week. These recordings are only for teaching purposes and should not be shared.

### Etiquette for Online Classes

Professors and students should join Zoom a few minutes before class in order to have time to solve any technical problems. When you join a class, your microphone will be muted. Individual professors will decide how to run class discussions and whether to enable such features as chat. As a general rule of thumb, you should mute your microphone when you are not speaking.

In seminars, students are required to make themselves visible. If you have concerns about what is visible, then either take the time to “curate” your environment or consider using the background option in Zoom. During lectures, you are welcome to turn off your video.

Students should feel free to contact the professor or Head of Education ([d.kontowski@utmn.ru](mailto:d.kontowski@utmn.ru)) to discuss any concerns that may arise concerning online delivery of the course (i.e., technical issues, course material availability, access to apps, communication challenges, and changes to syllabus or schedule). Don't wait until course evaluations to draw attention to your concerns!

### Technical Emergencies Protocols

Students who have difficulty getting online to attend a synchronous class or complete an assignment, should contact the professor immediately according to the specific instructions provided in the syllabus (i.e., via telephone, SMS, or email). Follow the below instructions concerning making up classes missed due to technical problems.

If your professor is not online for the start of a class session, keep Zoom open and check your email. If the professor does not come on-line or send a message to clarify the situation within 10 minutes after the official starting time, class is cancelled. Both the professor and a designated student should alert the Head of Education about the situation. Missed classes will be rescheduled; update class times to be shared via Canvas and Moodle.

### Attendance and Absences

Zoom has an attendance feature that will be used to record attendance. Attendance is required for all synchronous classes or required online activities (i.e., designated asynchronous tasks, timed assignments, group work meetings, etc.) and will be recorded on a grading sheet. Students can miss up to two classes without an excuse; every further absence will see the final mark lowered by 1 point for each class missed (i.e., a student who misses 6 class meetings without prior approval or a valid excuse cannot pass a course). Missing more than 15 minutes of scheduled online class is considered an absence, unless the student has received prior approval from the Head of Education.

If you plan to miss a class due to a legitimate conflict (i.e. attendance of a student conference), you must apply to the instructor for an approved absence at least seven days in advance and CC Head of Education. Without advanced approval, it will count as a missed class.



If you are sick, email all your instructors and Alyona Bunkova ([a.bunkova@utmn.ru](mailto:a.bunkova@utmn.ru)) as soon as possible to notify them that you will be missing class. They will follow up with you with any necessary arrangements related to your illness.

If you need to miss a class due to something that arises at short notice (i.e., bureaucracy that needs to be dealt with, an emergency at home), email the instructor as soon as possible to notify them about your absence. Should a student have repeated problems with attendance, the instructor will notify the Head of Education.

#### Making Up Classes Missed for Legitimate Reasons

Students who miss a synchronous class session to a legitimate conflict, an emergency that arises at short notice, or a technical problem will be required to watch the recording of the class and submit a written summary of the key points of the class, including any questions that you have about the content. This should be sent to the instructor via email within 48 hours of the ending of the class in order to receive credit. If a technical problem emergency situation persists beyond 48 hours, an extension may be granted. Students who are sick should watch the videos of missed classes in order to keep up on courses, but they are not required to submit written summaries.

#### Extensions for Assignments

All assignments must be submitted by their due dates. Extensions will be granted only when ill health, death of a loved one, or personal difficulties of a serious nature near the due date prevent completion of an assignment. As the due dates for assignments are stated in the syllabus, the pressure of other university work or extracurricular activities will not be accepted as a reason for an extension.

If you require an extension, you must write to your instructor at least three working days in advance. Clearly explain your situation and provide any necessary documentation (such as a medical certificate) to Alyona Bunkova. Your instructor should reply to you within one day; you will be notified by email about whether an extension has been granted.

#### Late Assignments

Late assignments will be penalized by a full grade deduction for each day of lateness. For example, an essay submitted three days late that received a mark of 7 would be reduced to 4. Late assignments will not be accepted once graded assignments are returned or after June 11. The acceptance of late assignments for minor assessments (worth 10 percent or less of the final mark, including minor tasks completed during class hours) is left up to the discretion of individual instructors.

#### Rescheduling of Classes or Substitution of Instructor

Should a course be unable to meet at its regular time, the instructor will liaise with Alyona Bunkova to approve the change and to find a different time that suits both the instructor and students. Should this occur, all involved will receive an email notification from Alyona Bunkova about the changed schedule and any schedule changes will appear in Modeus. If the instructor requires a substitute to replace them, students will be notified by email.

#### Grading

SAS uses a ten-point grading system. Grades from 0 to 3 are failing grades. Grades from 4 to 10 are passing grades. 10 and 9 are excellent grades given in exceptional circumstances.

In most courses, SAS faculty are obliged to follow the 7-rule. This may be calculated either as a "median" (the number of grades above 7 and the number of grades below 7 do not differ by more than 1) or an average (the average final grade for all students should fall between 6.50 and 7.49). The 7-rule may be applied to each assignment OR only to the final course marks. Exceptions to this rule are only granted by the Teaching Council.

#### Examinations

The examination will consist of 20 questions and lasts for 45 minutes (5 minutes to prepare, 40 minutes to write answers). The use of any electronic devices is prohibited. The examination may include the following types of questions: 1. Multiple choice questions; 2. Fill in the blanks questions; 3. Give the output for the given program (snippet). The number of questions of each type may vary, but

there will be 20 questions total. All answers must be written in English or in the relevant program code.

*Assessment Criteria:*

Satisfactory (C, or 3):	80% to 87% correct answers.
Good (B, or 4):	88% to 95% correct answers.
Excellent (A, or 5):	96% to 100% correct answers.

Course Evaluations

Toward the end of the quarter, students will be asked to complete an anonymous evaluation of the course. The results of the evaluations will be reviewed by the instructor, the Head of the Education Office, and the Teaching Council in order to improve education at SAS.

Academic Integrity

Students are expected to comply with the SAS Academic Integrity Document (see English version [HERE](#) or Russian version [HERE](#)). Cheating, plagiarism, and disrespectful behavior will not be tolerated and *must* be sanctioned by the instructor in accordance with the document. The use of any translation applications (Google Translate etc.) is highly discouraged. Students are required to cite any sources employed in written assignments using the citation style listed in the syllabus.

Online assignments will be “open book,” meaning that you can look at course reading materials and notes while answering the questions. However, the Academic Integrity still applies. That means: You must not communicate with anyone; your answers will be your own work; and you will not use Google Translate. You are discouraged from searching the Internet for answers, as you will run out of time, may risk violation of the Academic Integrity Policy, and will likely do worse than if you simply answer with the knowledge you already have.

**Date Syllabus Last Updated:** 16.04.2020