Program Content

Semester	IV	
Course Code:	IT 4306	
Course Name:	IT Project Management	
Credit Value:	3 (3L)	
Core/Optional	Core	
Hourly Breakdown	Theory	Independent Learning
	45 hrs	105 hrs

Course Aim:

- Project management is an essential aspect of any project. As is the case, IT project management presents a unique set of aspects as well as challenges to the overall aspects of a project. This course introduces the students on aspects to manage IT project.

Intended Learning Outcomes:

After successful completion of this course, students will be able to:

- demonstrate knowledge of project management concepts, methodologies and techniques
- identify major roles in a software project and how to manage a software project
- detect and resolve issues associated with project management
- develop various project teams for different kinds of information technology projects.

Course Content: (Main Topics, Subtopics)

Topic	Theory (Hrs)
1. Introduction to Project Management	05
2. Project Management and IT Context	04
3. The Project Management Process Groups	02
4. Project Integration Management	06
5. Project Scope Management	05
6. Project Schedule Management	03
7. Project Cost Management	03
8. Project Quality Management	02
9. Project Resource Management	02
10. Project Communications Management	02
11. Project Risk Management	06
12. Project Procurement Management	03
13. Project Stakeholder Management	02
Total	**45**

DETAILED SYLLABUS:

1: Introduction to Project Management (05 hrs)

1.1 What is a Project [Ref 1: pg. 4]
   a. Advantages of project management [Ref 1: pg. 4]
   b. Examples of information technology projects [Ref 1: pg. 4-6]
   c. Project attributes [Ref 1: pg. 6 - 7]
   d. The triple constraint [Ref 1: pg. 7 - 9]

1.2 What is Project Management? [Ref 1: pg. 9]
   a. Project stakeholders [Ref 1: pg. 9 - 11]
   b. Project management knowledge areas [Ref 1:pg.11-12]
   c. Project management tools and techniques [Ref1: pg.12-15]
   d. Project success factors [Ref 1: pg. 15 - 18]

1.3 Program and Project Portfolio Management [Ref 1: pg.18]
   a. Programs [Ref 1: pg. 18 - 19]
   b. Project Portfolio Management [Ref 1: pg. 19 - 21]
   c. Organizational Project Management [Ref 1: pg. 21 - 24]

1.4 The Role of the Project Manager [Ref 1: pg. 24]
   a. Job description [Ref 1: pg. 24 - 25]
   b. Skills for project manager [Ref 1:pg. 26 - 27]
   c. PMI Talent Triangle® and the Importance of Leadership Skills [Ref 1: pg. 28-30]
   d. Careers for IT Project Managers [Ref 1: pg. 30]

1.5 The Project Management Profession[Ref 1: pg. 30]
   a. History of Project Management[Ref 1: pg. 30 - 34]
   b. The Project Management Institute [Ref 1: pg. 34 - 35]
   c. Project Management Certification [Ref 1: pg. 35 - 36]
   d. Ethics in Project Management[Ref 1: pg. 36 - 37]
   e. Project Management Software[Ref 1: pg. 37 - 39]

2: Project Management and IT Context (04 hrs)

2.1 A Systems View of Project Management [Ref 1: pg. 49]
   a. What is a systems approach? [Ref 1: pg: 49 - 50]
   b. The three-sphere model for systems management [Ref 1:pg. 50 - 51]

2.2 Understanding Organizations [Ref 1: pg. 51]
   a. The Four Frames of Organizations [Ref 1: pg. 51 - 53]
   b. Organizational Structures [Ref 1: pg. 53 - 57]
   c. Organizational Culture [Ref 1: pg. 57 - 58]

2.3 Focusing on Stakeholder Needs [Ref 1: pg. 58 - 60]
   a. The Importance of Top Management Commitment [Ref 1: pg. 60 - 61]
   b. The Need for Organizational Commitment to Information Technology [Ref 1: pg. 61 - 62]
   c. The Need for Organizational Standards [Ref 1: pg. 62]

2.4 Project and Product Life Cycles [Ref 1: pg. 62]
   a. Project Life Cycle [Ref 1: pg. 63]
   b. Product Life Cycles [Ref 1: pg. 63 – 66]
   c. The Importance of Project Phases and Management Reviews [Ref 1: pg. 66]

2.5 The Context of Information Technology Projects [Ref 1: pg. 67]
   a. The Nature of IT Projects [Ref 1: pg. 67 - 68]
   b. Characteristics of IT Project Team Members [Ref 1: pg. 68]
   c. Diverse Technologies [Ref 1: pg. 68 - 69]

2.6 Recent Trends Affecting Information Technology Project Management [Ref 1: pg. 69]
   a. Globalization [Ref 1: pg. 69 - 70]
   b. Outsourcing [Ref 1: pg. 70 - 71]
   c. Virtual Teams [Ref 1: pg. 71 - 73]
   d. Agile [Ref 1: pg. 73 - 76]

3: The Project Management Process Groups (02 hrs)

3.1 Project Management Process Groups [Ref 1: pg. 86 - 90]

3.2 Mapping the Process Groups to the Knowledge Areas [Ref 1: pg. 91 - 93]

3.3 Developing an IT Project Management Methodology [Ref 1: pg. 93 - 95]

4: Project Integration Management (06 hrs)

4.1 What Is Project Integration Management? [Ref 1: pg. 152 - 155]

4.2 Strategic Planning and Project Selection [Ref 1: pg. 155 - 18]
   a. Strategic Planning [Ref 1: pg. 156 - 157]
   b. Identifying Potential Projects [Ref 1: pg. 157 - 158]
   c. Aligning IT with Business Strategy [Ref 1: pg. 158 - 159]

4.3 Methods for Selecting Projects [Ref 1: pg. 160]
   a. Focusing on Broad Organizational Needs [Ref 1: pg. 160 - 161]
   b. Categorizing IT Projects [Ref 1: pg. 161 – 162]
   c. Performing Financial Analyses [Ref 1: pg. 162 - 167]
   d. Using a Weighted Scoring Model [Ref 1: pg. 167 - 169]
   e. Implementing a Balanced Scorecard [Ref 1: pg. 169]

4.4 Developing a Project Charter [Ref 1: pg. 169]

4.5 Developing a Project Management Plan [Ref 1: pg. 173 - 174]
   a. Project Management Plan Contents [Ref 1: pg. 174 - 175]
   b. Using Guidelines to Create Project Management Plans [Ref 1: pg. 176 - 177]

4.6 Directing and Managing Project Work [Ref 1: pg. 177]
   a. Coordinating Planning and Execution [Ref 1: pg. 178]
   b. Providing Strong Leadership and a Supportive Culture [Ref 1: pg. 178 - 179]
   c. Capitalizing on Product, Business, and Application Area Knowledge [Ref 1: pg. 179]
   d. Project Execution Tools and Techniques [Ref 1: pg. 180 - 181]
4.7 Managing Project Knowledge [Ref 1: pg. 181]
4.8 Monitoring and Controlling Project Work [Ref 1: pg. 182 - 183]
4.9 Performing Integrated Change Control [Ref 1: pg. 184]
   a. Change Control on IT Projects [Ref 1: pg. 185]
   b. Change Control System [Ref 1: pg. 185 - 188]
4.10 Closing Projects or Phases [Ref 1: pg. 188 - 189]
4.11 Using Software to Assist in Project Integration Management [Ref 1: pg. 189 - 190]
4.12 Considerations for Agile/Adaptive Environments [Ref 1: pg. 190 - 191]

5: Project Scope Management (05 hrs)

5.1 What is Project Scope Management? [Ref 1: pg. 202 - 203]
5.2 Planning Scope Management [Ref 1: pg. 203 - 206]
5.3 Collecting Requirements [Ref 1: pg. 206 - 209]
5.4 Defining Scope [Ref 1: pg. 209 - 213]
5.5 Creating the Workbreakdown Structure [Ref 1: pg.213 - 225]
5.6 Validating Scope [Ref 1: pg. 225 - 227]
5.7 Controlling Scope [Ref 1: pg. 227 - 230]
5.8 Considerations for Agile/Adaptive Environments [Ref 1: pg. 231 - 232]

6: Project Schedule Management (03hrs)

6.1 The Importance of Project Schedules [Ref 1: pg. 242 - 244]
6.2 Planning Schedule Management [Ref 1: pg. 244 - 246]
6.3 Defining Activities [Ref 1: pg. 246 - 247]
6.4 Sequencing Activities [Ref 1: pg. 248 - 252]
6.5 Estimating Activity Durations [Ref 1: pg. 253 - 254]
6.6 Developing the Schedule [Ref 1: pg. 254 - 270]
6.7 Controlling the Schedule [Ref 1: pg. 270 - 272]

7: Project Cost Management (03hrs)

7.1 The Importance of Project Cost Management [Ref 1: pg. 286 - 287]
   a. What Is Cost? [Ref 1: pg. 287 - 288]
   b. What Is Project Cost Management? [Ref 1: pg. 288]
7.2 Basic Principles of Cost Management [Ref 1: pg. 288 - 293]
7.3 Planning Cost Management [Ref 1: pg. 294]
7.4 Estimating Costs [Ref 1: pg. 294 - 295]
   a. Types of Cost Estimates [Ref 1: pg. 295 - 296]
   b. Cost Estimation Tools and Techniques [Ref 1: pg. 296 - 298]
   c. Typical Problems with IT Cost Estimates [Ref 1: pg. 298 - 299]
   d. How to Develop a Cost Estimate and Basis of Estimates [Ref 1: pg. 299 - 304]
7.5 Determining the Budget [Ref 1: pg. 305 - 306]
7.6 Controlling Costs[Ref 1: pg. 306]
   a. Earned Value Management [Ref 1: pg. 307 - 311]
   b. Project Portfolio Management [Ref 1: pg. 312 - 315]

7.7 Using Project Management Software to Assist in Project Cost Management [Ref 1: pg. 314 - 315]
7.8 Considerations for Agile/Adaptive Environments [Ref 1: pg. 315 - 316]

8: Project Quality Management (02hrs)

8.1 Importance of Project Quality Management [Ref 1: pg. 328 - 330]
8.2 What is Project Quality Management [Ref 1: pg. 330 - 331]
8.3 Planning Quality Managment [Ref 1: pg. 331 - 334]
8.4 Managine Quality [Ref 1: pg. 334 - 335]
8.5 Conrolling Quality [Ref 1: pg. 335 - 336]
8.6 Tools and Techniques for Quality Control [Ref 1: pg. 336 - 351]
8.7 Modern Quality Management [Ref 1: pg. 351 - 355]
8.8 Improving IT Project Quality [Ref 1: pg. 355 - 362]

9: Project Resource Management (02hrs)

9.1 The Importance of Resource Management [Ref 1: pg. 374 - 377]
9.2 What is Project Resource Management? [Ref 1: pg. 377 - 378]
9.3 Keys to Managing and Leading People [Ref 1: pg. 378 - 391]
9.4 Developing the Resource Management Plan and Team Chater [Ref 1: pg. 391 - 396]
9.5 Estimating Activity Resources [Ref 1: pg. 396 - 397]
9.6 Acquiring Resources [Ref 1: pg. 397 - 403]
9.7 Developing the Project Team [Ref 1: pg. 403 - 408]
9.8 Managing the Project Team [Ref 1: pg. 409 - 412]
9.9 Controlling Resources [Ref 1: pg. 412]

10: Project Communications Management (02hrs)

10.1 Introduction to Project Communications Management [Ref 1: pg. 426 - 428]
10.2 Keys to Good Communications [Ref 1: pg. 428 - 434]
10.3 Planning Communication Management [Ref 1: pg. 434 - 436]
10.4 Managing Communications [Ref 1: pg. 436 - 441]
10.5 Monitoring Communications [Ref 1: pg. 441]
10.6 Suggestions for Improving Project Communications [Ref 1: pg. 442 - 452]

11: Project Risk Management (06 hrs)

11.1 The Importance of Project Risk Management [Ref 1: pg. 464 - 472]
11.2 Risk Management Planning [Ref 1: pg. 472 - 474]
11.3 Familiar Sources of Risk on IT Projects [Ref 1: pg. 474 - 477]
11.4 Identifying Risks [Ref 1: pg. 477 - 481]
11.5 Qualitative Risk Analysis [Ref 1: pg. 481 - 485]
11.6 Quantitative Risk Analysis [Ref 1: pg. 485 - 490]
11.7 Planning Risk Response [Ref 1: pg. 490 - 493]
11.8 Monitoring Risks [Ref 1: pg. 493 - 494]

12: Project Procurement Management (03 hrs)

12.1 What is Project Procurement Management? [Ref 1: pg. 506 – 511]
12.2 Planning Procurement Management [Ref 1: pg. 512 - 525]
12.3 Conducting Procurements [Ref 1: pg. 525 - 527]
12.4 Controlling Procurements [Ref 1: pg. 527 - 529]

13: Project Stakeholder Management (02 hrs)

13.1 The Importance of Project Stakeholder Management [Ref 1: pg. 540 - 542]
13.2 Identifying Stakeholders [Ref 1: pg. 542 – 546]
13.3 Planning Stakeholder Engagement [Ref 1: pg. 546 - 548]
13.4 Managing Stakeholder Engagement [Ref 1: pg. 548 - 550]
13.5 Monitoring Stakeholder Engagement [Ref 1: pg. 550 - 553]

Teaching /Learning Methods:

You can access all learning materials and this syllabus in the VLE: http://vle.bit.lk/ if you are a registered student of the BIT degree program.

Assessment Strategy:

Continuous Assessments/Assignments:

The assignments consist of two quizzes, assignment quiz 1 (It covers the first half of the syllabus) and assignment quiz 2 (It covers the second half of the syllabus). The maximum mark for a question is 10 and the minimum mark for a question is 0 (irrespective of negative scores). The final assignment mark is calculated considering both assignments. To pass the online assignment component, students will have to obtain at least 40% for each assignment. Students are advised to complete online assignments before the given deadline. It is compulsory to pass the online assignment component to qualify to obtain the Level II Higher Diploma in IT (HDIT) certificate.

In the course, case studies/Lab sheets will be introduced, and students have to participate in the learning activities.

Final Exam:

Final examination of the course will be held at the end of the semester. The course is evaluated using a two-hour question paper which consists of 25 MCQ (1 hour) and 2 Structured Questions (1 hour).

References/ Reading Materials:

Main Reading

Ref 1: "Managing Information Technology Projects" Kathy Schwalbe, 9th Edition, Course Technology, 2018 (ISBN-13: 978-1-337-10135-6)

Supplementary Reading

Ref 2: "Software Project Management" Bob Hughes and Mike Cotterell, Fourth Edition, Tata McGraw-Hill

Ref 3: "Software Project Management" Bob Hughes and Mike Cotterell, Fifth Edition, Tata McGraw-Hill