

Course PM for PhD Course: Basic Perl Scripting.

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The course presents the Perl language as a tool for convenient text processing and pattern matching. Language features are introduced in a gentle way to make the course comprehensible for people without extensive prior programming experience. The course covers general language structure, data storage and searching, regular expressions, and file processing. Information is presented in a series of 6 lectures with accompanied exercise sessions. An optional short project proposed by the student concludes the course. This course does *not* cover applications of perl to CGI web page generation or relational database design issues.

Course Objectives

After a successful course completion, the student will be able to:

- Use perl for text and file processing.
- Execute programs from perl environment and process their result.
- Design more complex, maintainable perl programs.

Language

The official language of the course is English.

Examination

A series of assignments is handed out during the course. The assignments involve writing a short perl script using techniques covered on the recent lecture. The assignments are to be solved individually. The solutions are to be handed in before or on the following lecture. At most two delays are accepted. In one or two cases, you will be asked to comment on your colleague's solution, and point out places when alternative methods could be used.

Optional 1.5hp project task gives an opportunity to propose a more complex task to be solved with perl, write its specification (2 pages), write its implementation and a short summary (1 page) describing the used perl programming techniques.

Course Content

Session 1: Introduction. Perl origins and philosophy. Typical tasks solved with perl. Programming style.

Session 2: Data structures. Lists and hashes. List functions. String functions. Special variables.

Session 3: More control structures. File processing. Program execution.

Session 4: Regular expressions. Special tags. Search and replace. Examples.

Session 5: Functions. Argument passing. Closures. Variable references.

Session 6: Extending Perl. Perl modules. Using CPAN. Writing Perl documentation.

Literature

L. Wall, T. Christiansen, and J. Orwant: Programming Perl, 3rd Edition. ISBN-10: 0-596-00027-8.